

Manitoba Medical Review



Official
Publication
of the
**MANITOBA
MEDICAL
ASSOCIATION**
Winnipeg
Canada

UNIVERSITY
OF MICHIGAN
JAN 28 1958
Vol. 38 1958

LIBRARY
OF MICHIGAN
JAN 28 1958
PERIODICAL
READING ROOM

No. 1

MEDICAL
LIBRARY

JANUARY, 1958

Medicine:

- Recent Advances in Pulmonary Disease,
J. A. MacDonell 15
- Review of Progress in Clinical Cardiology,
J. Hughes 16

Bacteriology:

- Recent Developments in Virology, J. C. Wilt 19

Ophthalmology:

- Recent Advances in Ophthalmology,
Howard Reed 23

Pathology:

- Pulmonary Ossification,
F. D. Baragar and C. N. Crowson 26

Editorial:

- Gordon Whitley 37
- Canadian Journal of Surgery 37

Letters to the Editor

- Liberty, Fraternity, Equality, S. Vaisrub 38

In Lighter Vein:

- Abstracts from the Literature 39

Book Review

- Book Review 41

Social News

- Social News 45

Medical History:

- Dr. Alex J. Douglas, 1874-1940, Ross Mitchell 47

Association Page:

- Northwestern District Medical Society 51
- Northern District Medical Society 51
- Keeping the Profession Informed 53
- Report of Group Sickness and Accident
Committee Submitted to the Executive
on December 11th, 1957 53
- Canadian Medical Association 55

Notices:

- Manitoba Medico-Legal Society 56
- Winnipeg General Hospital Medical Alumni
Association 56

Obituary

- Obituary 56

Department of Health and Public Welfare:

- Communicable Disease Report 63
- Mortality Statistics 63

Detailmen's Directory

- Detailmen's Directory 64

General Practitioners':

VALENTINE PARTY

Saturday, February 15th.

See Page 31



approaching the summit

tripal
(Triple Precipitate)

tripal comes closest to
the peak as a
general-purpose antacid

Tripal (Triple Precipitate) exhibits
a powerful buffer effect in association
with a straightforward neutralizing action.
Co-precipitation of the three components retains
in solid form the activity of Aluminium Hydroxide Gel.

The mildly constipating action of Calcium Carbonate
and Aluminium Hydroxide is balanced against the
laxative action of Magnesium Carbonate.

Each 15 grain TRIPAL tablet contains:

Magnesium Carbonate
Calcium Carbonate
Dried Aluminium Hydroxide Gel.

Samples and Literature on request.



C. L. BENCARD

Weston, Ontario

Medicine

1465

Recent Advances in Pulmonary Disease

J. A. MacDonell, M.D., F.C.C.P.*

Work of Breathing^{2, 3, 8}

Bringing atmospheric air into contact with the alveolar surface is accomplished by the pump action of the respiratory muscles. In this function the respiratory muscles perform mechanical work with O_2 as the source of energy. Although the work thus performed is difficult to measure, the O_2 consumed by the respiratory muscles may be measured under conditions of increments of resistance to breathing. Then the O_2 consumption of the respiratory muscles without the added resistance may be calculated. The portion of the total body O_2 consumption utilized by the respiratory muscles is termed the O_2 cost of breathing.

In subjects with obstructive emphysema, the O_2 cost of breathing is considerably greater than in normals, particularly at increasing ventilatory rates and volumes. The difference is due to the increased work required to overcome the added resistance of narrowed air passages. In such subjects a sort of physiological law of diminishing returns becomes operable. If the body is to provide for the increased metabolic demands of exercise or infection, the O_2 cost of supplying the necessary ventilation is so great that it is literally an uneconomical enterprise. Somehow the body decides upon and adjusts to a point of hypoxia and CO_2 retention at which it can continue to function. By what means this decision is reached and executed is a fascinatingly intricate problem.

The foregoing considerations may seem rather theoretical and yet they have provided an impetus to the study of respiratory function along different and productive lines, and a new understanding of some of the problems in clinical chest disease. Perhaps in the Work of Breathing, the O_2 Cost of Breathing, and/or the Efficiency of the Respiratory Muscles will some day be found an accurate practical measure of dyspnoea, a measure which has eluded physiologist and physician alike.

Respiratory Acidosis⁴

Respiratory acidosis, a syndrome of respiratory insufficiency, is manifested clinically by signs of chronic pulmonary disease, cyanosis and disturbances of consciousness, and biochemically by elevation of the blood CO_2 content and alterations in acid-base balance.

The function of the respiratory system in providing O_2 to and removing CO_2 from the alveolar capillary blood is accomplished when the following are normal:

(a) alveolar ventilation, depending upon patent airways and an intact respiratory centre—nerve pathway—respiratory muscle mechanism,

(b) alveolar distribution of inspired air, and

(c) distribution of the pulmonary blood flow.

Significant defect in any of these factors may lead to hypoxia and CO_2 retention. In this circumstance, the medullary respiratory centre, normally stimulated by increases in the blood pCO_2 , to a varying degree loses that sensitivity and to a reciprocal degree the more primitive O_2 receptors of the aortic and carotid bodies, stimulated by decreases in blood O_2 content, take control.

In chronic obstructive emphysema, a long-standing reduction in alveolar ventilation results in an increase in the blood CO_2 content and an hypoxia which gives rise to compensatory polycythemia. A condition of "compensated" respiratory acidosis, in which the blood pH is normal but the pCO_2 , CO_2 content and CO_2 combining power are elevated, now exists. At this stage, a respiratory tract infection or the injudicious use of respiratory centre depressants (morphine derivatives or barbiturates) may precipitate an acute respiratory acidosis with a low blood pH and further elevation of the pCO_2 . Mental confusion, irrational behaviour and disturbances in consciousness to the point of coma become evident. Since the stimulus for breathing is now largely the degree of hypoxia, the provision of high O_2 content mixtures in an attempt to improve cyanosis, will only depress respiration and aggravate the situation.

The basis of treatment of respiratory acidosis is to improve defective alveolar ventilation thus correcting the basic defect. The means of attaining this objective is to reduce the work of breathing by the following means:

I. Improve airway patency.

A. Antibiotics—control infection, the commonest cause of acute respiratory acidosis, and reduce inflammatory edema.

B. Bronchodilators—by parenteral and nebulized routes of administration reduce mucous secretions, mucosal edema and congestion, and relax bronchial smooth muscle spasm.

C. Steroids—to be thought of and used last in the therapeutic armamentarium. The only specific indication for their use is when the infection is adjudged of sufficient degree to cause relative adrenal failure.

II. Mechanically assisted respiration.

A. Intermittent Positive Pressure Breathing apparatus—assists inspiratory phase of respiration and delivers nebulised bronchodilators. Requires patient co-operation.

*Service of Medicine, Deer Lodge Hospital.

B. Cofflator — assists inspiratory and expiratory phases of respiration. Requires some patient co-operation.

C. Drinker type respirator (with exsufflator attachment)—requires no patient co-operation in providing complete artificial respiration. There is the additional advantage that under these circumstances O_2 and sedatives may be administered with impunity.

III. Reduce pulmonary congestion.

A. Digitalis and diuretics — should be administered routinely.

B. Venesection — performed if hematocrit exceeds 60%.

Respiratory acidosis is not an uncommon disorder. A plea is made for diagnostic awareness of the condition, laboratory facilities to establish the diagnosis and treatment facilities adequate to fulfil therapeutic aims.

Obesity and Hypoventilation⁵

Pickwick's fat boy has graduated from the realm of the neurologist as a pudgy narcoleptic to that of the respiratory physiologist as a rotund somnolent.

In the absence of primary pulmonary or cardiac disease, extreme obesity adds so greatly to the resistances opposing respiratory muscle action, thus increasing work and O_2 cost of breathing, that the mechanisms described in the previous sections are invoked. The result is alveolar hypoventilation with hypoxia leading to polycythemia, and hypercapnia leading to somnolence. A degree of right heart failure may also be present. Variations of the "pure" syndrome in which bronchitis or other forms of pulmonary disease are present, are logically acceptable.

Treatment is directed towards weight reduction and the measures already described for the control of respiratory acidosis.

Smoking and Chest Disease^{1, 6, 7}

With all the welter of publicity surrounding the association between cigarette smoking and the incidence of lung cancer, it seems almost redundant to raise the subject here. However, two points are to be discussed.

In the first place, although tobacco smoke has carcinogenic properties yet at least two conditions influence the production of lung cancer:

first that the irritant must act upon susceptible (genetically prone) tissue.

second that the irritant in sufficient concentration must act for a sufficient period of time. The relationship might be expressed as follows:

Index of Lung Cancer Susceptibility = Genetic factor \times Tobacco Factor (Average daily tobacco consumption \times duration of smoking habit) \times Other irritant factors.

In the second place, frightening though the association between lung cancer and the smoking habit may be, yet it is probably a minor problem in comparison with the incidence of other respiratory tract diseases caused by this self induced air

pollution. Chronic cough occurs with significantly greater frequency amongst smokers as compared with non-smokers. Indeed, so common is it a symptom that a cigarette cough is a socially acceptable affliction. The cigarette jingle might well be paraphrased to read:

"With those who use tobacco—
It is coughing 40 to 1."

Similarly, one survey rated smoking as the major cause of most cases of obstructive emphysema. As further evidence of the irritative qualities of tobacco smoke, microscopic changes in bronchial epithelium — basal cell hyperplasia, stratification and squamous metaplasia — have been demonstrated in smokers.

When disorders of the upper respiratory tract, beyond the scope of this discussion, and the cardiovascular effects are added to the foregoing, it must be concluded that the smoking habit contributes significantly to human disease and disability.

References

1. Averbach, O., et al: *Cancer*, 9: 1, 76-83, Jan.-Feb., 1956.
2. Campbell, E. J., Westlake, E. K., Cherniack, R. M.: *J. Appl. Physiol.*, 11: 303, Sept., 1957.
3. Cherniack, R. M. and Snidal, D. P.: *J. Clin. Invest.*, 35: 11, 1283-1290, November, 1956.
4. Cherniack, R. M. in Barach's book, *Pulmonary Emphysema*, P. 337-382, 1956.
5. Lillington, G. A., et al: *Diseases of the Chest*, 32: 1, 1-20, July, 1957.
6. Lowell, F. C., et al: *Ann. Int. Med.*, 45: 2, 268-274, Aug., 1956.
7. Phillips, A. M., et al: *Ann. Int. Med.*, 45: 2, 216-231, Aug., 1956.
8. Riley, R. L.: *The work of breathing and its relation to respiratory acidosis*. Edit., July, 1954, p. 172.

Review of Progress in Clinical Cardiology

J. Hughes, M.D., F.R.C.P. (C.)

Progress in the study of diseases and dysfunctions of the heart and circulation has, in the past few years, advanced at a remarkable rate and may be fairly ascribed to the introduction of new investigatory techniques. As a direct result of this, there has been a considerable impetus to progress in clinical cardiology. As advances in the past few years have been so legion, I wish to confine this review to only one small section of this, namely, the study of cardiac auscultation and phonocardiography.

Cardiac auscultation has intrigued physicians and baffled students for ages, but it is only of recent years that graphic recordings have enabled us to confirm or at times, confute previously honored auscultatory signs. However, more important than this, is that this investigatory technique has brought forth new and valuable auscultatory signs to enable physicians at the bedside to make more accurate diagnosis of disease.

Before discussing the various auscultatory signs, I would like to say a word about the stethoscope which is so often procured without advice, or much thought. Rappaport and Sprague have

studied the physical laws which govern auscultation and have come to several conclusions concerning the design of a good stethoscope. The rubber tubing should be thick and at the most 10 inches long and all connections should fit snugly. The internal diameter should be $\frac{1}{4}$ inch throughout. It is considered essential for proper auscultation to have both a Bell-type and a Bowles-type head. The former for detecting low-pitched sounds and murmurs, the latter for high frequency murmurs.

The first heart sound is considered to be made up of at least five components¹, but it is generally agreed that the main audible sound is due to closure of the A.V. valves; the mitral valve tending to close .02 to .03 seconds before the tricuspid². In certain pathological and physiological states, the first sound may be very loud and the loudness is most easily explained on the position of the valves at the onset of systole³.

The loudest first sound is produced when atrial contraction forces the leaflets wide open (or billows them⁴) just before the ventricles contract (around .10 seconds), but with a longer delay (.20 seconds) the valves float back producing a quieter sound. The loud first sound of mitral stenosis and hyperkinetic states is due to the high filling pressure keeping the cusps open until the onset of systole.

Audible splitting of the first sound is common in health and is then due to the .02-.03 second lag between mitral and tricuspid closure. Increase in right sided delay from complete right bundle branch block is associated with abnormally wide splitting of the first heart sound. Left bundle branch block on the other hand, seldom causes obvious splitting of the first heart sound, probably due to the absence of delay in onset of left ventricular systole in left bundle branch block⁴ although total duration of left ventricular systole is prolonged.

The presence of an early systolic ejection sound may simulate wide-splitting of the first sound. However both aortic and pulmonary ejection sounds are best heard at the base and not at the lower sternal edge as is the first sound. The presence of an aortic systolic ejection sound or click is often associated with coarctation, pulmonary atresia, aortic aneurysm, hypertension, arteriosclerosis and aortic valve disease⁵. The pulmonary systolic ejection sound is associated with dilatation of the pulmonary artery from increased flow in left to right shunts, from mild or moderate pulmonary valve stenosis (severe stenosis, diminishes flow so much that even with the post-stenotic dilatation no sound is heard) or from pulmonary hypertension².

There are two main varieties of systolic murmurs, which may be recognized. The first is the ejection type, which is due to the flow of blood through the aortic and pulmonary valves and the second is the regurgitant type, such as is seen in mitral or tricuspid incompetence.

Ejection murmurs are characterized by swelling to a peak about mid-systole and invariably finishing before the second sound, or at least before the sound of closure of the valve where the murmur originates⁶. This can usually be appreciated clinically, but occasionally requires phonocardiographic confirmation. These murmurs arise at the aortic or pulmonary valve with stenosis of valve or infundibulum, valvular damage without stenosis, dilatation of the vessel beyond, or increase flow or rate of ejection. The character of this ejection murmur is particularly important when differentiating murmurs heard at the apex; for aortic murmurs may often be best heard or even only heard at the apex, especially in patients with emphysema. It is usually only in severe aortic stenosis that there is any great difficulty in discerning the silent interval preceding the second sound.

In severe pulmonary stenosis the murmur may occasionally pass and drown the earlier aortic closure sound due to prolonged right ventricular systole and late closure of the pulmonary valve, but it always stops short of the pulmonary closure sound. In these cases, this must usually be confirmed by phonocardiography.

Probably the majority of innocent systolic murmurs are due to accentuation of the faint and inaudible ejection vibrations caused by flow through the aortic or pulmonary valves. These innocent murmurs are often musical in quality and become louder with increased blood flow as with exertion or excitement. There is also a tendency for them to occur in late systole.

Regurgitant murmurs, on the other hand, are always holosystolic; that is last throughout systole up to the second sound. This is due to pressure in the donor chamber being higher than in the recipient chamber throughout systole. Occasionally the regurgitant murmur in mitral incompetence is maximal in late systole, but on phonocardiographic tracing it will always be found to be holosystolic⁶.

The second heart sound is felt to be made up of at least four components¹, but again the audible portion is caused by closure of the aortic and pulmonary valves. The pulmonary valve closes .02 to .03 second after the aortic valve in quiet expiration, but on inspiration may normally be delayed .08 seconds, which is very easily heard as two distinct sounds^{2,6}. This wide splitting on inspiration is due to increased filling of the right ventricle from the extra-thoracic venous reservoir and is heard in most children and young adults. This split is best heard in the pulmonary area and is not normally heard over the apex.

Abnormal splitting of the second heart sound may occur in various disease states and is often of considerable diagnostic importance. This abnormal splitting is most easily diagnosed during the expiratory phase of continued respiration when splitting is normally minimal.

In complete right bundle branch block, noticeable wide splitting will occur even in the expiratory phase of respiration. In atrial septal defect or anomalous pulmonary venous return the selective increase in right sided flow will delay pulmonary valve closure to produce a split and this split is characterized by not increasing on inspiration. In mild and moderate pulmonary stenosis, whether valvular or infundibular, marked splitting of the second sound occurs (up to .1 second) and the degree of split holds better correlation to the right ventricular pressure than do the electrocardiographic changes⁷. In the Tetralogy of Fallot as the pulmonary flow is further reduced by the over-riding aorta and the ventricular septal defect, the pulmonary closure sound is almost invariably absent—a point of some importance. The presence of a split second sound rules out some of the more exotic congenital lesions such as a persistent truncus arteriosus and pulmonary atresia.

Transmission of the pulmonary closure sound to the apex is found in atrial septal defect where this area is over a dilated right ventricle and in pulmonary hypertension when the pulmonary closure sound is accentuated, and indeed this splitting at the apex with a loud pulmonary element is probably the best clinical sign of pulmonary hypertension.

Auscultation for an opening snap is of great practical importance in the diagnosis of mitral valve disease and its presence excludes pure mitral incompetence⁸. An opening snap if sought for can be heard in almost every case with dominant mitral stenosis⁹. The opening snap is of high frequency and short duration and so is heard best with the diaphragm-type of stethoscope and usually occurs 0.10 second after aortic valve closure. It may be confused with splitting of the second heart sound, but with practice can be differentiated by the fact that it is heard best at the lower sternal edge, inside or above the apex and is often well conducted; whereas the pulmonary sound is best heard at the second or third interspace and is absent at the apex, except in atrial septal defect and pulmonary hypertension. Also the mitral opening snap is best heard on expiration, whereas the split second sound is usually only obvious on inspiration. Absolute proof of an opening snap clinically depends on hearing all three sounds, that is, aortic and pulmonary valve closure and the opening snap. Presence of this sound makes the diagnosis of mitral stenosis definite and usually means that the valves are pliable and will respond

well to commissurotomy. The sound becomes small or disappears with significant mitral incompetence or calcification or any significant degree of aortic incompetence. In some severe cases of mitral stenosis with high pulmonary artery pressure, the mid-diastolic murmur may be absent and the diagnosis can only be made by hearing an opening snap.

Another commonly heard auscultatory sound is the third heart sound. This heart sound may be heard normally in the great majority of children and in about 50% of young adults, occasionally in middle age and rarely in the elderly^{9,10}. This sound is accentuated by any condition which encourages rapid left ventricular filling. For example—mitral incompetence, ventricular septal defect, patent ductus arteriosus and left ventricular failure. The sound at times, may be confused with an opening snap, but it is of much lower frequency (heard best with a Bell stethoscope) occurs later in diastole and is best heard at the apex. Its presence rules out pure mitral stenosis⁸ and indicates the probability of mitral insufficiency or aortic valve disease. A variation of this sound heard in constrictive pericarditis and considered to be due to the filling ventricle hitting the constricting pericardial shell, is described by Harvey. The timing of this sound, however, is identical with a third heart sound, although its pitch is higher and its intensity greater.

I doubt that anything further should be said of the early diastolic murmur of aortic and pulmonary incompetence and the rumbling low-frequency diastolic murmur of mitral stenosis, except to point out that this latter murmur is not diagnostic of mitral stenosis as it may occur in many congenital and acquired cardiac lesions.

The detection of these newer signs require concentration, practice and appreciation of their importance. When sought for, they can be elicited by simple auscultation at the bedside and enable us as clinicians to make the more accurate cardiac diagnoses that are required with the onset of newer methods of surgical corrective procedures.

References

1. Luisada: *The Heart Beat*.
2. A. Leatham: *Lancet*, 607, 1954.
3. Dock: *Arch. Int. Med.*, 51: 737, 1937.
4. Braunstein, E. and Morrow, A. G.: *Circ.*, 14: 915, 1956.
5. McKisick: *Circ.*, August, 272, 1957.
6. Leatham, A.: *Circ.*, Sept., 420, 1957.
7. Leatham, A. and Weitzman, D.: *Brit. Ht. Jr.*, July, 1957.
8. Bridgen, W. and Leatham, A.: *Brit. Ht. Jr.*, Jan., 953, 1953.
9. Mounsey, P.: *Brit. Ht. Jr.*, 15: 135, 1953.
10. Wood, P.: *Diseases of the Heart and Circulation*, 1956.

Bacteriology

Recent Developments in Virology*

J. C. Wilt, M.D., M.Sc., F.A.C.P.**

The classification of virus infections according to the area of the body involved has certain merits but also has limitations. It is useful where the symptoms are confined to one area such as the central nervous system and indicates the number of possible infective agents which produce disease in that particular organ. Clinically this may be as far as one can go in specific diagnosis, particularly in central nervous system and respiratory infection. The classification is useful in the laboratory also, since samples submitted for examination from a patient with a respiratory infection can be tested for the viruses which produce only that type of infection. The disadvantage of such a classification is that viruses do not always run true to form and a virus which usually produces a respiratory infection may occasionally produce a central nervous system infection and would not ordinarily be tested for in the laboratory. The classification, in other words, tends to set up artificial boundaries in our thinking, to which the viruses do not always conform in their production of disease.

There is undoubtedly no field of medicine in which there have been as many advances as in virology in the past three to four years. These recent developments are largely attributable to the development and use of tissue culture as a medium for the isolation and propagation of virus.

The most numerous and important new virus isolations have been made in the C.N.S. group. The isolation of new viruses from patients with a C.N.S. infection were first made during the course of the poliomyelitis vaccine field trials in 1954. It was the practice here as elsewhere, to examine feces and blood of all children in the field trial who had any symptoms of a C.N.S. infection. A few Poliovirus isolations were made, but many more viruses were isolated which were not identifiable; similar viruses were isolated from normal children and were subsequently called "orphans," with the implication that they had no parent disease. A committee was established to study these isolates in 1955; now at least 14 antigenic types have been defined. The name was changed by the committee to enteric cytopathogenic human orphans, usually designated "Echo." The question in everyone's mind at this time was, of what significance were these new organisms in the production of human disease? One of the first indications came from Buffalo, N.Y., in 1955 where the type 6 Echo virus was isolated from the spinal fluid of a number

of patients with aseptic meningitis; the patients developed antibodies to this virus during the course of the disease. None of the patients developed paralysis or other residual symptoms. This group of viruses has been incriminated since that time in epidemics in widespread areas; a similar syndrome was observed in England and called Nottingham meningitis. This outbreak differed in that the meningitis was associated with a skin rash; the virus isolated in Nottingham meningitis has since been identified as type 9 Echo virus. This does not completely clarify the relation of this group of viruses to human disease by any means, as the majority of types have still not been connected with any disease and it is possible that syndromes other than aseptic meningitis may be produced by some of these. It has been suggested for example, that an infectious exanthematous disease seen in Boston in 1951, from which viruses were isolated and stored, are related to the Echo group.

Although the Coxsackie viruses were first isolated and identified some ten years ago, their relation to human disease is still being established. This group of viruses is mainly characterized in the laboratory by their ability to produce disease in suckling mice. This has been a very useful criterion until lately when some strains of the Echo virus also produce disease in newborn mice; this is causing a great deal of consternation. The Coxsackie viruses are classified into two groups, A and B, on the basis of the distribution of lesions in suckling mice. The Group B viruses, types 1 to 5, are much more important disease-producers and are rarely recovered from normal persons. Group B are among the agents recovered from aseptic meningitis, they also produce epidemic pleurodynia and may produce gastro-intestinal disturbances in infants. The type 9 of the Group A viruses has also been recovered from patients with aseptic meningitis; the Group A viruses are associated with herpangina.

It is probable that in non-epidemic poliomyelitis summers or non-equine encephalitis summers, that epidemics of viral encephalitis or meningitis are often attributable to the Coxsackie or the Echo viruses. The precise relationship of these to C.N.S. disease has not been entirely established, and a good deal of work remains to be carried out on these viruses before their relation to human disease is completely understood. Types of Echo viruses which have been shown to produce disease consistently will necessarily have to be called something else as they are no longer "orphans;" this situation now holds for types 6 and 9.

The number of viruses in the respiratory group have increased from two (Common Cold and Viral Pneumonitis) to at least six, some of these having multiple types.

*An address to the Manitoba Medical Association annual meeting, October 16th, 1957.

**Departments of Bacteriology, University of Manitoba and the Winnipeg General Hospital.

A good deal of work has been done on the attempted isolation of the Common Cold virus but there is still some doubt as to whether it has been isolated and propagated *in vitro*. The most recent report on this has been to the effect that the virus has been isolated on tissue culture and that a vaccine has been prepared which has considerable efficacy in the prevention of the common cold. This work which was reported in the lay press recently, has not as yet been substantiated in other laboratories.

Primary atypical pneumonia is a distinct type of viral pneumonitis, produced by a distinct virus which has been isolated and shown to be related to this disease. This is the only type of viral pneumonitis in which an increasing concentration of cold agglutinins and streptococcal MG agglutinins develop during the course of the disease.

Influenza is produced by four major immunological virus types, A, B, C, and D; each of these is made up of a family or group, the members of the family usually having a fairly close relation to one another but a rather remote relation to other families. Influenza A virus was first isolated and identified in 1933, Influenza B. in 1940. The great tendency for Influenza viruses to vary or mutate has been known for some time; a mutant strain usually has a close relation to its parent strain; it may be neutralized by the same antisera and is then designated as the same type. When a mutation or variation occurs to the extent that parent A antisera will not completely neutralize the mutant offspring, this mutant is designated differently, i.e., as A prime; an A prime strain was identified in 1947. This year we have an A strain which differs from both A and A prime since neither A nor A prime antisera will neutralize it; this is the Asiatic variety of influenza. It is interesting that influenza mutations can be cyclical, the present Asiatic strain having a relation to a virus which produced a widespread epidemic particularly in Holland in the latter part of the nineteenth century; sera from persons involved in that epidemic still contains neutralizing antibodies to the Asiatic Influenza virus.

The other recent development in influenza is the isolation of Influenza Type D which is grossly different from A, B, or C. This virus was first isolated in 1952 in Japan from infants in a newborn nursery where several deaths resulted from an acute respiratory infection. The virus had the general characteristics of the Influenza viruses, but was not sufficiently related to any of the existing types to be considered an A, A prime, B, or C and was therefore called Influenza D. Subsequent serological surveys carried out in Japan have shown that a relatively high percentage of the population carry Influenza Type D antibodies. More recently, surveys in the United States have shown that 40% of the adult population have antibodies to this virus.

The Adenovirus group (A. P. C.) is made up of at least 16 antigenically distinct types; four of these types are related to human disease involving the eye, throat or lungs. Types 3, 4 or 7 may produce viral pneumonitis or pharyngitis; 3, 4 and possibly 8 (epidemic keratoconjunctivitis) may produce conjunctivitis. The remaining types are generally considered to be commensals, living in perfect harmony within the host. The sera of patients with adeno-virus infections develop specific neutralizing antibodies against these viruses. There is no doubt that considerable knowledge has yet to be forthcoming on other infections produced by these viruses and on the relationship of the group to other virus types.

Giant cell pneumonia, usually of infants has been considered to be of possible virus etiology for some years. Enders in 1956 reported the isolation of a virus similar to the virus of measles from such cases. It is still not known whether this form of pneumonia really represents measles without a rash or some other form of measles.

Despite the identification of these many etiologic agents of virus pneumonitis, the majority of cases that are clinically considered as pneumonitis remain undiagnosed, even with the most extensive laboratory investigation. There remains therefore, a great deal of virological investigation to be carried out in this field.

Viruses in the cutaneous group often produce a systemic infection but the cutaneous manifestation is so striking that they are placed in this category. Measles virus was first isolated in 1954 by Enders from throat washings and blood of patients with early measles. Neutralizing antibodies have been demonstrated in the sera of patients ill with this disease. Investigations indicate that it would be distinctly possible and practical to prepare a vaccine.

There is a greater and more practical need for the isolation and identification of the virus of Rubella rather than Rubeola, with the established relationship of abnormal newborns to exposure of the mother to this virus in early pregnancy. A rapid test which would indicate active disease in the person contacted or previous immunity on the part of the mother would be of great value. At the present time there is always an element of doubt as to whether the person contacted had Rubella or whether the pregnant mother had Rubella in childhood. Anderson in 1954 produced with some difficulty changes in monkey kidney tissue culture inoculated with throat washings from typical cases of Rubella; convalescent serum inactivated the agent. This evidence has not been confirmed in other laboratories as yet.

The virus of chickenpox has been isolated by Weller in Boston in 1952. This again has not been confirmed. The virus of Herpes zoster, similar if not identical to that of chickenpox, has also been reported to have been recently isolated. A good

deal of work has been done on the precise relationship of the two viruses which is so well established clinically. It is felt that the disease, Herpes zoster, is actually the reaction of a partially immune or previously exposed person to the virus of chickenpox.

An unusual exanthematous disease, resembling measles, was reported in Boston in 1951. A virus was isolated in a high proportion of cases and most of the isolations were identical. These have recently been restudied and are now considered to belong to the Echo group.

There are a number of miscellaneous infections from which viruses have been isolated. A virus has been isolated from patients with severe acute croup and has been called the A.L.T.B. virus (Acute Laryngo Tracheo-Bronchitis). The patients have been shown to develop antibodies against the agent during the course of the infection. Recently viruses of the Coxsackie B group have been isolated from children dying of myocarditis. The virus of hepatitis on which so much work has been carried out in the past few years, was reported to have been isolated about one year ago. Although considerable work has been carried out, using identical tissue culture methods, this claim has not been substantiated.

In summarizing the recent development in virology, it can be said that no field in medicine has been as productive in the last three to four years; as many viruses having been isolated in this time as were identified in the preceding 30 years. Although this is a real accomplishment, it has created many problems; one of these is to establish the relation of these new isolates to human disease. There is no doubt that some of the new isolates will be established as pathogens and others as non-pathogens. A second problem is establishing the relation of these new viruses to one another; it is doubtful that the present classification of new viruses is entirely correct. There would seem to be, for example, a closer relation between Echo type 9 and Herpes simplex than between Echo 9 and Echo 6. The recovery of so many viruses from healthy persons raises a very basic problem in immunity; do these normal carriers establish and maintain immunity by carrying these viruses without apparent effect, or may these viruses become "unmasked" and produce disease in the carrier due to some unknown stimulus. A further very practical problem is the isolation and identification of other new viruses; many diseases are still of unknown etiology, i.e., infectious mononucleosis and

infectious hepatitis. The isolation of so many new viruses has placed an increased responsibility on the medical profession to identify precisely the infectious processes in the community; this is a part of modern scientific medicine. There is no doubt that if this responsibility is accepted, many new viruses will yet be identified.

One of the practical problems is the method of collection and submission of specimens to the laboratory. This is a technical matter, readily resolved by contacting the laboratory. A much greater problem also in the field of responsibility of clinicians and public health personnel is the decision as to when to collect specimens and from what types of infection. Virus infections are usually epidemic; epidemics do not all require laboratory investigation, for example, measles, mumps, chicken pox. The virus infections requiring investigations are those that have serious implications, such as those producing C.N.S. diseases. Others requiring investigation include the respiratory group in which tests are valuable to determine the etiology as well as epidemiology. A third group are the problem cases in which the etiology is unknown. A fourth group includes those in which the etiologic agent has never been isolated and further advances in our knowledge depends on the isolation and identification of the causative agent, for example, infectious hepatitis and infectious mononucleosis.

It is not necessary to collect samples from all patients in an epidemic, a sampling usually from six to eight patients is all that is required to determine the etiologic agent. This sampling should include the classical clinical syndrome seen in the majority of patients as well as variations from this classical syndrome, to exclude the possibility of two or more epidemics occurring simultaneously.

The problem of recognizing an epidemic in its earliest stage requires a detection system outside the laboratory. The persons most qualified to recognize an outbreak are the clinicians and the public health workers, since they are in close contact with any unusual outbreaks of infection. In Manitoba we have the two basic requirements of a good detection system; the first is a Virus Laboratory and the second is a well-informed and interested group of clinicians. The third prerequisite for the system is that a good liaison be established and maintained between these two groups; we would like to encourage the clinicians to continue to inform us as to their views on epidemics or unusual outbreaks of infections, so that these may be investigated.

CONNAUGHT

The Work of the Connaught Medical Research Laboratories in **EXTRACTS OF GLANDS AND OTHER TISSUES**

The discovery of Insulin at the University of Toronto has been followed by improvements and modifications in the preparation of **Insulin Crystals** and **Protamine Zinc Insulin** in which research conducted at the Connaught Medical Research Laboratories has been a major factor.

Liver Extract Injectable has been purified so that a small dose (1 cc.) every two weeks is usually adequate treatment. Sensitivity reactions are remarkably few.

Heparin, originally prepared from dog liver at Johns Hopkins University, is now produced in many laboratories from beef liver or beef lung by methods developed at the University of Toronto.

Research at the Connaught Medical Research Laboratories has also been concerned with various glandular extracts having special but very limited use in Canada. Thus production of **Adrenal Cortical Extract**, **Corticotrophin (ACTH)** and **Growth Hormone** has been undertaken from time to time for use in physiological and clinical studies.

CONNAUGHT MEDICAL RESEARCH LABORATORIES
UNIVERSITY OF TORONTO
TORONTO 4, CANADA

Established in 1914 for Public Service through
Medical Research and the development of Pro-
ducts for Prevention or Treatment of Disease.

Depot for Manitoba

BRATHWAITES LIMITED
429 Portage Avenue at Vaughan Street, Winnipeg

Ophthalmology

Recent Advances in Ophthalmology

Howard Reed*

M.B., M.S. (Lond.), F.R.C.S. (Eng. & C.), F.A.C.S.
Department of Ophthalmology, University of Manitoba

Preservation of Corneal Grafts

The operation of corneal grafting is not and never will be a common one because the patients requiring this operation are few. Despite the small demand it is always difficult to obtain donor corneae just at the time that they are required. Corneal material must be obtained within a short time of death and permission for the removal of this material must be obtained from the nearest of kin. There is a readily understood reluctance to approach near relatives at this difficult time with such a request. It would therefore be a great advantage if corneae could be preserved indefinitely in a bank so that donor material is available whenever it is required.

Many institutions now store red blood cells, bone or cartilage and other tissues for indefinite periods of time. Some of these tissues do not survive storage but the search for the best means of storing them has stimulated research into the storing of corneae. It has been shown by some workers that corneae can be preserved for up to nine months^{1, 2, 3} and still be viable at the end of this period. Much work still needs to be done before these methods of storage can be considered to be wholly reliable.

Various methods of storage have been used. One of the best methods is to dehydrate the corneae with glycerin and then freeze the material with a mixture of dry ice and alcohol.

The viability of stored material has been tested in various ways. The real test is to perform the operation and obtain a clear graft. But, if an opaque graft results, it does not always mean that the graft was not viable. The operation itself involves many hazards and the graft may become opaque as a result of technical complications during the operation or through an immune body reaction. Ormsby³ and others have used tissue culture techniques to determine the viability of the cornea after storage. In England⁴ the oxygen uptake of the corneal material after storage and thawing has been measured as an indication of the viability of the stored material. In Winnipeg we have been using the tissue culture technique of testing viability of stored corneal material.

Many problems arise as to the best method of storage. In the first place, should the freezing be slow or rapid? Rapid freezing is done by plunging the bottle containing the cornea into the freezing mixture. But this appears to kill the graft and often breaks the bottle. Slow freezing may be obtained by wrapping the bottle in several layers

of paper before placing it in the dry ice. This method is more successful.

Similarly thawing may be rapid or slow. Rapid thawing may be obtained by placing the material in normal saline or a similar physiological solution at 37° C. On the other hand, slow thawing may be obtained by allowing the container and its contents to stand at room temperature and thaw out slowly. It is generally agreed that in the case of corneae a slow freeze and a rapid thaw is best for preserving the viability of the graft.

The next problem to be decided is the percentage of glycerin in which to preserve the cornea. This has been tested by carrying out a series of experiments using serial dilutions of glycerin. Tests of this nature have shown that 10 to 15% glycerin is the best medium in which to store corneae.

Another problem which has not been considered very thoroughly to date is the pH of the glycerin. This problem is being studied by some of us in the Department of Bacteriology of the University of Manitoba. The experiments are not complete but it appears that a pH of 8 is the best for preserving viability.

It has been shown by the workers in England and elsewhere, that preserved corneae may be stored and used up to nine months. It seems that corneae preserved in this way are quite suitable for superficial grafts of the cornea but they are not suitable for penetrating grafts. Superficial grafts are indicated for lesions involving the superficial layers of the cornea. Since there is a need for more superficial grafts than penetrating grafts it is obvious that there is a considerable field of usefulness for preserved corneae when once these problems of storage have been fully worked out.

Immunology of the Corneal Graft

For some time it has been known that only skin taken from another part of the body of the same person is likely to survive after grafting. If skin is transferred from one person to another it is almost certain to be shed. Only a few exceptions to this general rule have been reported. Skin may be transferred from one identical twin to another without danger of sloughing. Furthermore, a person with agammaglobulinemia may receive a skin graft from another person without its being shed.

In a recent article, Nelken⁵ and his co-workers reported the extraction of antigens A and B from corneal tissue and anti-A and anti-B antibodies were demonstrated in human aqueous. No Rh antigens were found in the corneal tissue. They also showed that an immune reaction may occur after keratoplasty when the donor graft is from an individual with a blood group incompatible with the host. In fact, they demonstrated that the late

*Winnipeg Clinic, Winnipeg, Manitoba.

clouding which occurs in some corneal grafts is an antigen-antibody reaction which behaves entirely on the basis of the blood groups.

It seems therefore that the shedding of the skin in the case of a homogenous skin graft is also due to an antigen-antibody reaction, the antigens being those of the normal blood groups.

The question then arises, if homogenous skin grafts are so constantly shed, why is it that homogenous corneal grafts are so rarely shed and often even remain clear? Two reasons may be mentioned. Firstly the cornea is normally avascular so that the antibodies do not readily reach the site of the antigen i.e. the corneal graft. In support of this, it is constantly observed that a graft to a vascular cornea is much more likely to become opaque than a graft to a clear cornea. Secondly the size of the corneal graft is small so that its antigenic effect is small. Maumane⁶ has shown that if a piece of skin from the same donor is grafted at the same time as the corneal graft thus increasing the concentration of antigens the incidence of clouding is increased.

It is to be hoped that this new information concerning the clouding of corneal grafts will lead to the development of further techniques which will increase the percentage of clear grafts.

The Self-Sterilizing Property of Vitreous

In this review, one year ago, I mentioned the report by Shafer⁷ of the operation of "Vitreous Implantation" for the treatment of retinal detachment. For many years it was classical teaching that an infection of the vitreous was exceedingly dangerous. It was pointed out that the vitreous contained first class biological protein which was maintained at body temperature and was therefore an ideal culture medium. Furthermore, no blood vessels passed through it so that a satisfactory mobilization of antibodies to overcome an infection was impossible. It was taught that if organisms gained entrance to the vitreous, rapid infection was inevitable and almost certainly led to complete disorganization of the eye.

Since many people obtain vitreous from cadaveric material, the danger of intraocular infection from the operation of vitreous implantation has been thought to be a very real one. However, Shafer mentioned that he had found that if vitreous is infected with haemolytic streptococci or staphylococci and stored at 40° F, it becomes sterile in 48 hours. This statement of Shafer's has been questioned by Suie and Sroufe⁸ in recent correspondence, who stated that they had found that if the vitreous was cultured 48 hours after inoculation with organisms, these organisms were still present. They therefore reiterated the danger of intraocular infection following the procedure of vitreous implantation.

This problem has interested Dr. Wilt and myself⁹ and we have carried out a number of experiments which have borne out Shafer's claim. We have

found that all the test organisms viz. *Staphylococcus pyogenes*, *Streptococcus pyogenes*, *Bacillus pyocyaneus*, and *Bacillus coli* with the exception of the spore bearer, *Bacillus subtilis*, gradually disappeared from human vitreous when it was stored at 40° C. This was shown by test cultures at intervals. Some organisms required several days or weeks to disappear depending on the concentration of the organisms, heavy concentrations taking longer than small concentrations. Massive inoculations of organisms failed to perish in one month although the numbers of colonies grown on test culture at the end of this period were greatly reduced. It seems therefore that the vitreous has a self-sterilizing property which was completely unsuspected. Dog and rabbit vitreous appear to lack this property.

Further experiments are being carried out, and it is probable that in the next few months there will be a spate of literature upon this subject. This is an interesting development, and it would be exciting if a new antibiotic was found to be present in human vitreous. Perhaps it would be called vitreomycin.

Intraocular Acrylic Lenses

Two years ago, these newer methods of treating aphakia were discussed in this journal. At that time I pointed out that this new method of dealing with aphakia was as revolutionary as Daviel's introduction of cataract extraction in 1752.

Ridley¹⁰ has now been using his method of placing an intraocular acrylic lens between the iris and the posterior capsule for nearly 8 years (Fig. 1). He is continuing to use this method with confidence and success. I watched him perform

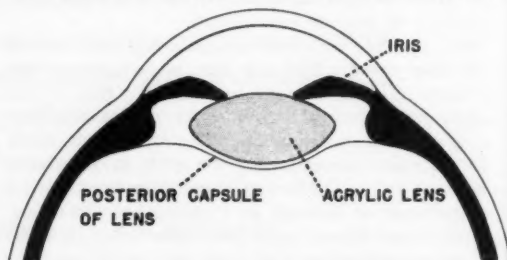


FIG. 1. RIDLEY'S ACRYLIC LENS

this operation on several occasions in London this year, and in his hands it is undoubtedly a valuable procedure. However, there is no doubt that it has a number of limitations. The cataract extraction must be an extracapsular one and the operator must be very sure of removing all the lens fragments. This means that the cataract must be mature or hypermature. If it is not, there is a risk that the soft lens material may form an opaque capsule in the pupil as dense as the original cataract. There is an ever present danger that the lens may rupture through the posterior capsule into the vitreous and if this happens the eye may

be lost because it is almost impossible to retrieve the lens.

Because of these disadvantages of the Ridley operation, Strampelli introduced his lens which is placed in the anterior chamber and maintained in position by three little spikes which stick into the angle of the anterior chamber between the iris and cornea (Fig.2). This operation has been adopted

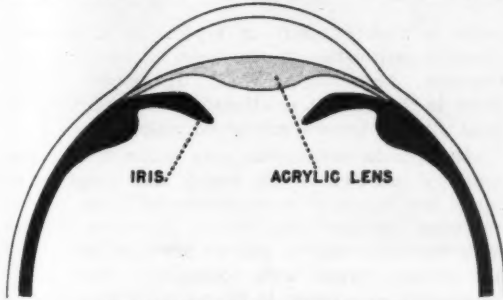


FIG. 2. STRAMPELLI ACRYLIC LENS.

by Joaquin Barraquer¹¹ of Barcelona and he has now inserted more than 200 Strampelli lenses. I had the privilege of visiting his clinic this year and it is a pleasure to be able to record that I have never seen more technically perfect surgery performed anywhere. I saw him do six of these operations and I saw a number of postoperative cases operated upon several months previously. The results appeared to be excellent.

He performed this operation on patients with: 1. monocular aphakia, 2. high myopia, 3. anisometropia above 5 diopters. One may doubt the wisdom of treating severe bilateral myopia and anisometropia with an intraocular acrylic lens, but it seems to be an excellent operation for unilateral aphakia in a young person. Barraquer is strongly opposed to inserting intraocular lenses in bilateral aphakia following bilateral cataract extraction.

These Strampelli lenses can now be obtained to measure not only in Italy but also in Barcelona, Spain and in London, England. The corneal diameter of the eye must be given and the exact refraction of both eyes. Three lenses are supplied on each order, of varying sizes, and the lens which is the best fit is inserted. The remaining two lenses are returned. It appears to be beyond doubt that the operation of placing intraocular acrylic lenses is an operation which is with us to stay. It will be some time, however, before the indications for this operation and the best lens form have been established.

Photocoagulation of the Retina

Meyer-Schwickerath¹², of Bonn, Germany, has introduced a novel method of treatment. Following an eclipse of the sun a few years ago, he saw a number of patients who had watched the eclipse with inadequate protection. They developed burns of the macular area of the retina which were

followed by scarring. This is a well known phenomenon but it occurred to Meyer-Schwickerath that it might be possible to utilize the effect of excessive radiation of the visible spectrum for therapeutic purposes.

He devised an instrument in which it is possible to project, by means of a simple switch, an exceedingly powerful beam of light through an optical system resembling a giant ophthalmoscope. Filters eliminate all rays except those of the visible spectrum and the shortest infrared rays. In this way it is possible to coagulate any area of the retina with direct ophthalmoscopic control. The coagulations appear as localized areas of blanching.

He has carried out a number of experiments on animals and has shown that such a burn will penetrate the whole thickness of both the retina and the choroid and part of the way into the sclera if these structures are in contact. Healing results in firm adhesions forming between them.

He has used this method to treat shallow retinal detachments. He has found it of great value because it is possible to use the ophthalmoscope to look at the retina and as soon as the edge of the hole is in view, a switch is turned on and that area is coagulated with direct visual control. In this way retinal tears may be sealed off very accurately, and its use is quite painless. Unfortunately, its value is limited by the fact that if the retina is separated from the choroid by more than one diopter, adhesions fail to develop.

A possible field of usefulness is the prophylactic treatment of an area of peripheral cystic degeneration of the retina when it is feared that a retinal detachment might develop. A considerable number of patients have been treated for this condition.

Encouraging results have been obtained in the treatment of Eales' disease or retinal vasculitis in which the affected areas are relatively localized. A few cases of von Hippel-Lindau disease have also been successfully treated in this way. Several small melanomata of the choroid have been coagulated with this machine with no recurrences to date.

At the present time Meyer-Schwickerath has the only machine of this nature which is available. It is made for him by the firm of Zeiss. There are considerable difficulties in its manufacture because unless it is accurately made it involves some danger to the operator. If he uses too intense a beam of light without adequate protection he runs some danger of coagulating his own retina. The firm of Zeiss is hoping to market this machine in the near future.

References

Preservation of Corneal Grafts

1. Eastcott, H. H. G., Cross, A. G., Leigh, A. C. and North, D. P.: *Lancet*, 266: 237, 1954.
2. King, J. H.: *Am. J. Ophth.*, 43: 353, 1957.
3. Cockeram, A. M., Basu, P. K. and Ormsby, H. L.: *Am. J. Ophth.*, 43: 380, 1957.
4. Leigh, A. G. and Ridge, J. W.: Paper read at Oxford Ophthalmological Congress in July, 1957, and to be published in *Transactions of Ophthalmological Society of United Kingdom* 1957.

Immunology of the Corneal Graft

5. Nelken, E., Michaelson, I. C., Nelken, D., Gurevitch, J.: *J. Lab. & Clin. Med.*, 49: 745, 1957.
6. Maumenee, A. E.: *Am. J. Ophth.*, 34: 142-152, 1951.
7. Shafer, D. M.: *Tr. Am. Acad. Ophth.*, 61: 194, 1957.
8. Sule, T. and Strout, S.: *Am. Acad. Ophth.*, 61: 530, 1957.
9. Reed, H., Wilt, J. C., Tushingham, G.: To be published

in A.M.A. Arch. Ophth.

Intraocular Acrylic Lenses

10. Ridley, H.: *Tr. Ophth. Soc. U. Kingdom*, 71: 617, 1951.
11. Barraquer, J.: *Tr. Ophth. Soc. U. Kingdom*, 1956.
12. Meyer-Schwickerath, G.: Paper read at Oxford Ophthalmological Congress, July, 1957. To be published in *Tr. Ophth. Soc. U. Kingdom*, 1957.

Pathology

Pulmonary Ossification*

A Review Illustrated by Selected Cases

F. D. Baragar, M.D.**

and

C. N. Crowson, M.D.***

Radiological reports of chest films contain frequent references to radio-opaque densities in lung fields. In one recent instance, serial chest films revealed numerous opacities bilaterally in all lobes. When this case came to autopsy, our interest was stimulated by the unusual pattern of calcification and ossification it revealed. The following presentation and classification is based upon a review of the pertinent literature, and is illustrated with selected cases.

There are three major types of pathological calcification:

Dystrophic Calcification—which is the deposition of lime in dead or degenerating tissue; **Metastatic Calcification**—which is the precipitation of calcium salts in previously undamaged tissues due to an excess in the circulating blood; and **Metaplastic Ossification**—which is the formation of bone in soft tissues as opposed to simple lime salt deposition.

Dystrophic calcification usually occurs in hyalinized fibrous tissues in association with chronic inflammation. The exact mechanism of dystrophic calcification is not well understood, but is presumed due to an increased alkalinity of tissues, a local increase of phosphatase and inorganic phosphates, and antecedent fatty degeneration or necrosis¹.

Calcium salts are normally only deposited in the formation of bones and teeth, but pathological calcification occurs frequently in excretory and secretory passages as well as soft tissues. The sites most commonly affected are the pineal gland, blood vessels, kidneys, and lungs.

Subsequent to calcification, ossification may occur. Karsner² states that calcification follows inflammation; granulation tissue then erodes the calcareous mass and new connective tissue cells from the granulation tissue undergo functional metaplasia and act as osteoblasts. Moore³ goes further stating that the osteoblasts form trabecular bone and between the trabeculae and spicules

there is fibrous tissue or typical bone marrow. Gradual ossification is also seen in older calcium deposits. According to Wells⁴ this occurs "where there is the correct relationship between calcium salts, fibrous tissues, and blood supply."

Metaplastic ossification may occur in the eyes, kidneys, muscles, heart, aorta, and lungs. The lungs are stated in most textbooks to be one of the more common sites, but the literature contains very few case reports and no adequate review of the various types with examples. This paper represents an attempt to fill partially this relative void.

Pulmonary ossification is best divided into two major types, as shown in Table I.

Table I

Focal	Disseminated
1. (Tuberculosis, Chronic abscess, etc.)	1. Trabecular or branching (senility, chronic sepsis, etc.)
	2. Tuberoses or nodular circumscribed (mitral stenosis)
	3. Microlithiasis alveolaris pulmonum (metabolic?)

The focal type is found characteristically in calcified tuberculous lesions in the apices or occasionally in the walls of chronic lung abscesses⁵.

The following illustration (Fig. 1) shows the chest x-ray of an 81 year old male with a typical Ghon lesion in the right mid-lung field. At autopsy the lungs grossly showed a small stony hard nodule in the right lung, which, microscopically, showed a localized area of true bone formation with trabeculations and marrow surrounded by an area of dense fibrosis (Fig. 2). True bone formation is not uncommon in these lesions.

Disseminated pulmonary ossification can be divided into three fairly distinct patterns as shown in Table I. While these three types may occur as distinct entities they often reveal features in common with one another.

Of the disseminated ossifications, the commonest is the trabecular or branching type which is usually found in elderly people giving a protracted history of chronic pulmonary or cardiac disease. It is often limited to a particular segment of the lung, and not widely disseminated. It tends to predominate in the lower lobes. The x-ray shown in Fig. 3 is from an 85 year old Veteran with a diagnosis of chronic pulmonary sepsis, bronchiectasis of the right lower lobe and latterly arteriosclerotic heart disease with congestive failure. The x-ray shows well marked fibrosis,

*Presented at a Clinical Luncheon, Deer Lodge Hospital, 10 June, 1957.

**Senior Intern, Dept. of Pathology, Deer Lodge Hospital, Winnipeg, Man.

***Director of Laboratories, Deer Lodge Hospital, Winnipeg, Man.



Figure 1



Figure 2

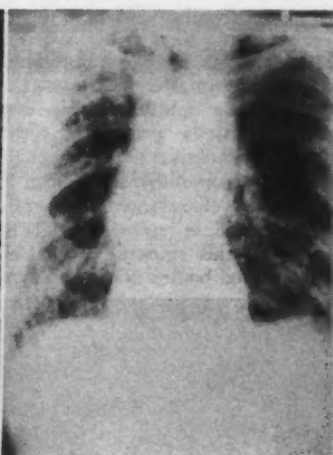


Figure 3

especially in the right lower lung field, with numerous small radio-opacities and mottling. At autopsy the lungs showed numerous stony hard nodular areas. A post-mortem x-ray picture of the lung (Fig. 4) shows branching radio-opaque spicules running out to the periphery in the septums of the lungs, and often continuous for some distance but with isolated spicules. Microscopically, there was true bone with active marrow showing megakaryocytes. This bone formation occurred along vessels and in bronchial cartilages (Fig. 5) and was associated with areas of calcification, bronchiectasis, and severe pulmonary fibrosis. The etiology of trabecular ossification would appear related to senile avascular degeneration.

The tuberosc or nodular circumscribed type is usually found in younger persons with mitral stenosis, but cases have been reported without organic heart disease⁶. Some authors suggest that in many instances chronic passive congestion is a

significant etiologic agent⁷. These nodules are found lying free in alveolar spaces, and appear to be preceded by osteoid tissue rather than dystrophic calcification⁸. Detailed histologic studies of the nodules reveal intra-alveolar bone formation, with or without marrow cavities, through which dense collagen and elastic fibres can be shown to course and merge with the alveolar septa. Varying degrees of organization of intra-alveolar exudates can be located in these lungs, from young granulation to totally hyalinized bodies resembling the ossified bodies characterizing the completed process. The post-mortem x-ray of the lung from the previous case (Fig. 4) in addition to the trabecular pattern shows radiological features consistent with the tuberosc type with isolated nodules of bone particularly in the lower lung fields. Microscopically, the lung (Fig. 6) shows these areas of bone formation lying free in the alveolar spaces. Other areas of lung (Fig. 7) show a small hyaline body



Figure 4

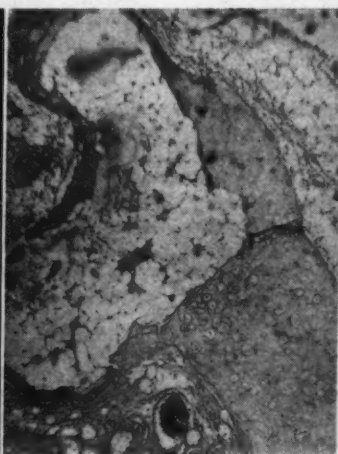


Figure 5

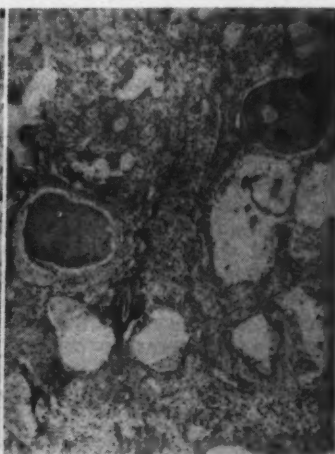


Figure 6

lying in an alveolus and probably representing a precursor of the bony nodules in Fig. 6.

Microlithiasis alveolaris pulmonum is the rarest type of disseminated ossification. In this type very numerous microliths are deposited in the alveoli eventually producing severe respiratory distress and massive thoracic opacity of the type seen in the next illustration (Fig. 8). At autopsy the lungs are characteristically stony hard, heavy and fixed, and microscopically (Fig. 9) there are numerous small smooth laminated calcified and rarely ossified bodies lying free in a portion of the

scribed nodular ossification occurs makes it reasonable to assume that it may have a dual etiology, either from mitral stenosis and rheumatic pneumonitis as above or following some interstitial and/or organized pneumonias. Pulmonary microlithiasis was originally believed to occur only in normal lungs but subsequent reports have shown that in addition it may occur following pulmonary sepsis, mitral stenosis, or other cardiac lesions. The pathogenesis of this form is most likely a combination of local and systemic factors. Wells suggested that an abnormal acid-base exchange predisposes

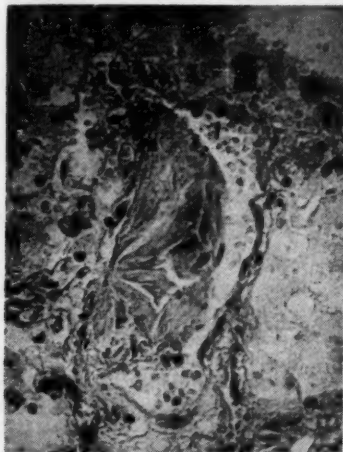


Figure 7

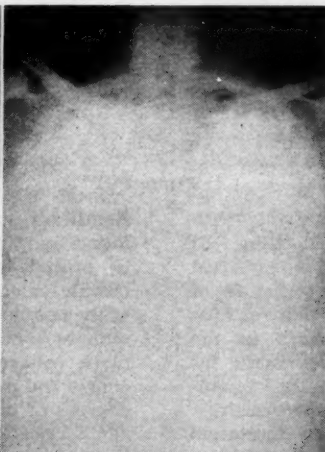


Figure 8

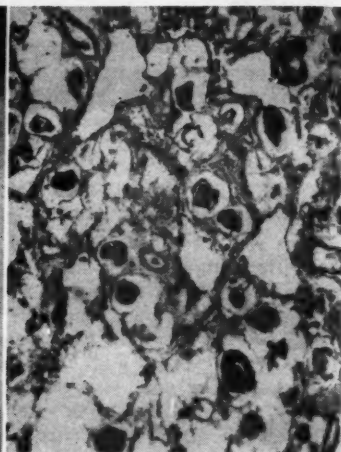


Figure 9

alveolar spaces. These calcospherites are similar to structures referred to as corpora amylacea but contain no metachromatic amyloid material⁹. They are often unrelated to other pulmonary or respiratory disease, and their etiology is rather obscure but their production may be related to an abnormal acid-base and calcium relationship in the body⁴.

Discussion

There is no unanimity of thought on the etiological factors producing pulmonary ossification. Focal ossification presumably results from calcification of old localized areas of necrosis with subsequent metaplasia of the involved tissue to produce true bone. Disseminated ossification of the trabecular or branching type is most frequently seen as a senile change in chronic pulmonary sepsis. It is probably due to hyaline degeneration of the bronchovascular and interstitial tissues and/or organizing alveolar exudates. The nodular circumscribed or tuberosiform form of ossification was originally found only in younger people with mitral stenosis and was presumed due to chronic passive congestion with haemosiderosis. Further study has shown this form may occur without mitral stenosis and without evidence of haemosiderosis. Some authors attributed it to changes occurring in alveolar exudates following the infiltrative pulmonary changes found in some cases of rheumatic fever⁷. The variety of conditions under which circum-

to the formation of calcified and ossified intra-alveolar stones. It would seem reasonable that local factors such as fibrosis, inflammation and abnormal circulation may increase the tendency for these changes to take place.

An important contribution reviewing 21 cases of pulmonary alveolar microlithiasis from the literature and adding 23 new cases has appeared recently (Sosman et al¹⁵). An hereditary influence is suggested by the occurrence of 13 of the 23 cases in a total of 5 families. The authors suggest that the condition results from an inborn error of respiratory metabolism at the alveolar interface, possibly an enzyme fault.

While these three forms of disseminated pulmonary ossification are generally considered to be distinct entities, one of our cases shows features common to the trabecular and tuberosiform forms of ossification and other authors⁶ have reported cases in which microlithiasis alveolaris pulmonum co-existed with tuberosiform nodular ossification.

Summary

The various forms of pulmonary ossification have been reviewed with examples. The pulmonary lesions fall into two main groups: Focal and Disseminated; the latter appearing in three more or less distinct forms which may on occasion over-

lap. Etiologic and pathogenic mechanisms have been suggested for these various entities.

References

1. Barr, D. P.: Pathological Calcification, *Physiol. Rev.*, 12: 593, 1932.
2. Karsner, H. T.: Human Pathology, 7th Ed., J. P. Lippincott Co., Phil., p. 85, 1949.
3. Moore, R. A.: Textbook of Pathology, W. B. Saunders Co., Phil., p. 71, 1945.
4. Wells, H. G.: Chemical Pathology, 5th Ed., W. B. Saunders, Phil., 1925.
5. Satinsky, V. P. and Kron, S. D.: Heteroplastic Ossification in Chronic Lung Abscess; *Dis. Chest*, 27: 196, 1955.
6. Sharp, M. E. and Danino, E. A.: Unusual Form of Pulmonary Calcification: Microlithiasis Alveolaris Pulmonum, *J. Path. & Bact.*, 65: 389, 1953.
7. Lawson, H. M.: Disseminated Ossification of Lungs in Association with Mitral Stenosis, *Brit. M. J.*, 1: 433, 1949.
8. Wells, H. G., and Dunlop, C. E.: Disseminated Ossification of the Lungs, *Arch. Path.*, 35: 420, 1943.
9. Kent, G., Gilbert, E. S., and Meyer, H. H.: Pulmonary Microlithiasis, *Arch. Path.*, 50: 556, 1955.
10. Badger, T. L., Gotlieb, L., Gaensler, E. A.: Pulmonary Alveolar Microlithiasis or Calcinosis of the Lungs; *New Eng. J. Med.*, 253: 700, 1955.
11. Gough, J.: Diseases of the Lung, from Hadfield, G.: Recent Advances in Pathology; J. A. Churchill Ltd., London, 212, 1953.
12. Wright, G. P.: An Introduction to Pathology, 2nd Edition, Longmans, Green and Co., London, 1954.
13. Anderson, W. A. D.: Pathology, 2nd Ed., C. V. Mosby, St. Louis, 1953.
14. Boyd, W.: Textbook of Pathology, 6th Ed., Lea & Febiger, Philadelphia, 1953.
15. Sosman, M. C., Dodd, G. D., Jones, W. D., and Pillmor, G. U.: The familial occurrence of Pulmonary Alveolar Microlithiasis; *Am. J. Roentgenol. & Rad. Therapy*, 77: 947, 1957.

Obstetrics & Gynaecology

Recent British Practice in Obstetrics and Gynaecology

C. Jean McFarlane, M.D.

The purpose of this paper is to discuss briefly a few of the problems in Obstetric and Gynaecologic practice which in the past several years have excited particular interest in the British Isles.

Gibberd has pointed out that, with few exceptions, radical changes in Obstetric practice are rare, and progress for the most part consists of gradual, subtle change with alterations in emphasis and re-assessment of old problems. The following discussion bears out this statement. There is little that is radically new. Experimental problems which have not undergone extensive clinical trial are not included in this paper. No attempt has been made to compare British and Canadian viewpoints on these problems since there would appear, in fact, to be little significant variation between them.

Great interest has been aroused in the British Isles concerning the effect of ionizing radiations on the human. Of particular interest to the obstetrician is the work of Dr. Alice Stewart and her colleagues at Oxford who, in September of 1956, published a preliminary report of a survey of cases of malignant disease and leukemia in childhood which suggested that these conditions were considerably commoner in children whose mothers had had x-ray examination of the abdomen in pregnancy.

While there appears to be an increased incidence of leukemia in persons who have been exposed to large doses of irradiation, this is the first evidence to suggest that the very small dose to which the unborn foetus would be exposed (probably in the range of 2.5 r) might be harmful.

An extensive literature has arisen discussing this subject. Both the Medical Research Council in England and the National Academy of Sciences in the United States have published reports on the effects of ionizing radiations on the human. Opinion is divided as to the maximal safe roentgen dosage which can be employed in diagnostic radiology. Possible damage inflicted as a result of diagnostic x-ray procedures during pregnancy on maternal

and foetal germ cells with production of abnormal genes through mutation is also being studied.

A critical assessment of these studies is quite beyond the scope of this paper, and it must be emphasized that this work is still in the preliminary stages. The great value of diagnostic radiology in obstetrics is undisputed and to deprive the patient of a necessary x-ray study in the case of suspected abnormality would appear to be unjustifiable at this stage.

Argument continues to rage in the British Isles, as indeed, it does here in Canada, as to just what extent post-maturity contributes to perinatal mortality. The work of Walker and his colleagues in Aberdeen in 1954, demonstrating that the foetus suffers from a gradually increasing shortage of oxygen as pregnancy is prolonged beyond 40 weeks, has been generally accepted.

The problem is—at what stage past term is this anoxia likely to be of sufficient severity to justify induction of labour, a procedure which, in itself, may jeopardize the life of the foetus? Indeed, many obstetricians in both this country and in the British Isles feel that, in spite of Walker's findings, the actual incidence of perinatal deaths which can be attributed solely to post-maturity is so low as never to warrant induction of labour for this reason alone.

On the other hand, Clayton has shown that the risk of foetal anoxia is higher in primigravidae delivered at 42 weeks or later, than in multi-gravidae. Walker, moreover, states that the foetal hazard increases in direct proportion to the age of the mother in both primigravidae and multi-gravidae. In addition, there appears to be increased risk of anoxia, presumably because of placental insufficiency, in cases of pre-eclampsia and of previous threatened abortion.

Because of these findings some British obstetricians confine induction of labour for post-maturity to those cases where the mother is a primigravida in the older age group, who has gone beyond 42 weeks and who gives a history of threatened abortion early in pregnancy or who shows evidence of pre-eclampsia, when the pre-

eclampsia itself is not of sufficient severity to indicate induction.

British obstetricians, in evaluating the concept of afibrinogenemia as a factor in the production of some cases of postpartum haemorrhage, have stressed the rarity of the condition. Nevertheless, in most of the larger obstetric centres, a stock of fibrinogen has been made available in case of need.

Anaesthesia is now considered to be a common, if not the commonest cause, of death in operative obstetrics. It has been estimated that 20 maternal deaths occur per year in the British Isles as a result of obstetric anaesthetic accidents. The greatest risk of maternal death related to anaesthesia is the occurrence of inhalation of vomitus. Delayed gastric emptying is frequent in the labouring patient. In addition, it has been found that fluid vomitus constitutes a much more serious hazard than the solid undigested meal. Because of this it is felt that the administration during labour of strong hypertonic glucose drinks should be avoided.

Increased awareness on the part of the obstetrician of the dangers associated with inhalation anaesthesia has led to wider adoption of regional methods of anaesthesia, (pudendal block). Both anaesthetist and obstetrician are in agreement that an obstetric anaesthetic should be administered by a skilled anaesthetist.

The use of hormones in the management of pregnancy in diabetes, with special regard to foetal mortality was investigated in 1955 by the Medical Research Council. Comparable groups of patients with diabetes, but free from major cardio-vascular complications, were separated according to age and parity and randomly divided into hormone treated and non-hormone treated groups. Beginning before the end of the 16th week of pregnancy, one group received tablets containing graduated doses of oral progesterone (25-250 mgm./day) and stilboestrol (50-200 mgm./day)—the others were given inert tablets.

The frequency of stillbirths and neonatal deaths in the two groups was almost the same, with a total death rate of viable foetuses of 24% in the hormone treated group and 26% in the other.

As a result of these findings, it was concluded that stilboestrol and progesterone orally in the doses prescribed do not reduce foetal mortality in diabetic patients and have little, if any, beneficial effect on maternal health.

This work is at variance with the published figures of such workers as Priscilla White in Boston. There has been criticism both of the Medical Research Council results in Britain and of White's results in the U.S.A. and it appears that this problem is not yet settled.

Natural childbirth, as advocated by Grantly Dick Read, has few advocates in Britain now. Many obstetricians have in the past been interested in this idea, tried it out, and found it unsatisfactory.

One cannot fail to be impressed by the standard of British ante-natal care. The overall attendance

for ante-natal care is extremely high in England. Unfortunately, this is not the case in Canada. A significant proportion of patients are seen in this country for the first time at the onset of labour.

The incidence of carcinoma of the corpus is apparently increasing—it now appears to be about half as common as carcinoma of the cervix. In connection with the aetiology of the disease, it has been often pointed out that it occurs with unusual frequency in nulliparous women who are obese, who have a late menopause, who have diabetes, fibroids, and hypertension and who often give a history suggesting previous oestrogenic overactivity.

The association between diabetes and carcinoma of the endometrium is not proven. Studies by Joslin and by Peel suggest that the association is more apparent than real.

In regard to the treatment of carcinoma of the corpus, it has been generally accepted that when an endometrial growth involves the uterine isthmus or cervix it spreads in the same direction as a primary cervical growth and for this reason should be treated as a carcinoma of the cervix by means of either primary irradiation or Wertheim's hysterectomy, the latter being a procedure which should only be performed by the skilled operator.

Some workers, including Rickford at the Chelsea Hospital for Women, and Winterton at the Middlesex, suggest that the incidence of regional node metastases is higher in all types of carcinoma of the corpus than usually supposed. Accordingly, these workers have employed Wertheim's hysterectomy in all cases of carcinoma of the corpus, whether the cervix was involved or not. However, it is generally felt that such an extensive operation is unnecessary. An extension of the usual total hysterectomy is performed, including preliminary occlusion of the cervix, removal of a large cuff of vagina and at least partial dissection of the ureters in order to obtain a sufficient amount of parametrium on each side. This, in itself, is a formidable surgical procedure and should not be undertaken by other than the skilled surgeon.

Dobbie has employed post-operative radium in these cases, using a special applicator for irradiating the whole of the vagina in an attempt to prevent recurrences both at the vault and at the introitus.

Needless to say, many variations and combinations of surgical and radiotherapeutic techniques are in use in Britain, as in this country, in the treatment of this disease. In both countries emphasis has been placed upon the fact that the long-term results are not as satisfactory as at one time thought.

Because of the high mortality associated with deep iliac lymph node dissection, Stanley Way now modifies his surgical approach to carcinoma of the vulva. Extensive iliac node dissection is confined to those cases in which there is histological evidence of involvement of nodes at lower levels. Blaikely, in treating carcinoma of the vulva, varies

his technique with each patient, basing his decisions upon such factors as the site of the vulvar growth, the fitness of the patient and the histology of the tumour.

The operation of pelvic exenteration for advanced pelvic malignancy is performed only rarely in the British Isles. The late Sir Charles Read emphasized that a place exists for the operation in carefully selected cases, provided that the aim of the operation is to secure palliation rather than cure. Lewis reiterates this important point, stating: "If cure of the patient becomes the criterion of success, the operation is doomed to failure and will eventually be abandoned because of the very small proportion in which prolonged survival is achieved."

In patients with malignant vesico-vaginal, recto-vaginal and combined fistulae, Blaikely has performed the operation of colpocleisis, closure of the vagina, employing the Latzko technique. This appears to be a very useful procedure and may at least make the patient relatively comfortable compared with her previously hopelessly miserable condition.

The treatment of high non-malignant vesico-vaginal fistulae, whether arising from obstetric trauma, pelvic surgery or radium, has been reviewed by Chassar Moir at Oxford. Moir operates on all fistulae from the vagina and does not dissect out separate bladder and vaginal flaps in the traditional fashion. After saucerizing the area around the fistulous opening, he brings the raw surfaces into apposition by a series of wire or nylon vertical mattress sutures, avoiding tension by the use of relieving incisions. Suction drainage of the bladder is employed post-operatively for at least 14 days. Moir has achieved a remarkably high incidence of success by the use of this technique.

There is no doubt that much of his success in this notoriously difficult field is due to his personal ability as an operator.

The argument concerning the mechanism of stress incontinence remains still to be settled. The theory of Jeffcoate and Roberts that stress incontinence is associated with funneling of the bladder base and obliteration of the posterior urethro-vesical angle, has recently been questioned. Simmons, at a recent Royal Society meeting demonstrated cineradiographic observations of bladder function during micturition. He failed to confirm Jeffcoate's findings. A heated discussion developed at this meeting, and the conclusion reached by at least some members of the group was that the mechanism of stress incontinence is as obscure as it ever was.

The Marshall-Marchetti operation is now quite popular in Britain. It is seldom performed as a primary procedure in the treatment of stress, but is usually reserved for recurrent stress following an initial attempt to cure it by vaginal repair. Most operators emphasize the importance of long term follow-up in these cases in order to assess adequately the value of any operative procedure.

In conclusion, ladies and gentlemen, I make no apology for the obvious omissions in this paper of many interesting problems. I have attempted to briefly review one or two subjects of current interest, both in Britain and in this country. In presenting a paper of this nature, it is clearly implied that the interchange of students and ideas between different centres in different countries, remains one of the most stimulating facets in our profession.

I should like to thank Professor Elinor Black for her very helpful criticisms in the preparation of this paper.

You Are Invited to Our . . .

Annual Valentine Party

Reception - Dinner - Entertainment - Dance

Saturday, February Fifteenth

Royal Alexandra Hotel

6.30 p.m. - - Dress Optional

Join us. Meet your friends
and enjoy every minute of
a most sociable evening.

Make your reservations early.
Further information may be
obtained from the Social Committee.

Sponsored by: The General Practitioners' Association of Manitoba

Every woman suffering from estrogen deficiency deserves "Premarin".
Prompt symptomatic relief (often with an initial dosage as low as 1.25 mg. daily) gives the patient
a gratifying "sense of well-being" and greater enjoyment of everyday living.

"PREMARIN"

STILL LEADING IN
ESTROGEN REPLACEMENT
THERAPY

And when the menopausal syndrome
is complicated by excessive tension...

"PREMARIN"
with
MEPROBAMATE

Provides extra relief from mental
and muscular tensions



Ayerst, McKenna & Harrison Limited,
Montreal

Editorial

S. Veisrub, M.D., M.R.C.P. (Lond.), F.R.C.P. (C.), F.A.C.P., Editor

Gordon Whitley

The youthful grey haired man with the gravel voice, the sprightly step and the cheerful smile is no longer with us. For nearly a quarter of a century he managed our journal with cool efficiency and warm enthusiasm. He left us with many fond memories, and a sense of loss.

Gordon Whitley will long be remembered as the man who more than anyone else is responsible for the growth and development of the Manitoba Medical Review. It is largely through his untiring devotion that our publication has attained its enviable eminence in the field of provincial medical journalism.

Seldom did a man immerse himself so completely in his work. The "book"—he never referred to the Review as the journal—was to him more than a job, it was a passionate dedication. He took pride in its form, its size, and its contents. He read everything that was submitted for publication, even though as a layman he could not understand it all. He had ears sensitive to criticism, eyes observant of the reader's reaction and a mind with a ready imagination for the planning of measures that would result in the betterment of the Review.

We owe our departed manager a great debt of gratitude. May the vitality that he has imparted to our publication be his living memorial.

Ed.

Canadian Journal of Surgery

The first issue of the Canadian Journal of Surgery, a new quarterly published by the Canadian Medical Association, has slipped in quietly and unobtrusively onto the shelves of our Medical libraries on the first of October 1957.

In his modest, almost apologetic "foreword" the Chairman of the Editorial Board states: "It would seem reasonable that a country of more than 16,000,000 people and 12 medical schools should have such a publication." This is an understatement. It would seem reasonable, indeed, that a country of the aforementioned size should have more publications of this kind. Other specialties should and undoubtedly will, follow suit. The more the merrier.

Casting aside all unfounded fears of losing its surgical contributors, the Manitoba Medical Review extends the best wishes for success to the new arrival on the scene of Canadian Medical journalism.

Ed.

Letters to The Editor

Dear Editor:

I have, with my Committee, recently completed the Nomination list of the General Practitioners' Association of Manitoba. In reviewing this list I am impressed with the calibre of the men nominated to represent General Practice in Manitoba. To this list may be added Nominees from the Floor of the Annual Meeting.

The duties which fall on those elected, are the Economical, Political (Medical) and Social interests of General Practice in Manitoba. The College of General Practice has taken over things Educational.

From this group, as in the past, will radiate matters of importance, not only to the G.P. but to Manitoba Medicine generally.

To this group will come a multitude of questions, which they will discuss, and if not within their powers to solve, will co-operate with other Organized Medicine, in their solution. The future is in their hands. They will handle their problems well and judiciously.

Their problems: Shall we enumerate a few questions now being asked?

1. How long must the Profession continue to subsidize the Public through M.M.S.?

2. Should the patients, cared for by the General Practitioner, be made to subsidize the preferential

tariff?

3. Does the present representation of the Manitoba Division, on the Executive Committee of C.M.A. in view of past performance, represent our interests?

4. Is our present prepaid Medical Scheme maintaining Medical standards at the highest level?

5. Would the interests of General Practice be better served by alliance with the Canadian Confederation of Labour?

6. Has the Professional Policy Committee died aborning?

7. Should the Profession get out of the Insurance Business?

8. Do G.P. Services encroach on Specialist Services or vice versa?

9. Will rising costs of Hospitalization force home Medical care for children and Maternity?

10. Should the G.P., having entrusted his patient to the care of a Specialist, be permitted to assist that Specialist?

11. Should the Doctor be compelled to surrender his patient to Hospital Staff care, when said Hospital will later collect from the Municipality, and the patient will later pay the Municipality?

12. Can Insurance forms be streamlined, and can a standard fee be set for their completion?

13. Can Workmen's Compensation and Coroners' fees be brought into line with rising costs?

These questions and many similar are asked of the Executive of the General Practitioners' Association. Their consideration of the same molds our future.

J. F. Edward, M.D.

Dear Editor:

In the week of October the 6th, 1958, the M.M.A. will hold its 50th Annual Meeting. This will coincide with the 75th anniversary of the founding of the Manitoba Medical College.

It is hoped that an outstanding meeting may be organized, that many graduates will return for class reunions, and that a number of our famous sons may return to participate in the program and enjoy meeting their former classmates.

The program committee wish to obtain the names and addresses of as many of our famous sons as possible. It would be appreciated if all your readers would consider these matters and drop a note to the undersigned with the names, achievements and addresses of those Manitoba graduates who might contribute to the program.

Yours truly,

R. L. Cooke, M.D.

In Lighter Vein

Liberty, Fraternity, Equality

S. Vaisrub, M.D.

M.R.C.P. (Lond.), F.R.C.P. (C), F.A.C.P.

Not even an expert Freudian analyst could hope to untangle the web of ideational associations that led the writer of these lines to think of Liberty, Fraternity and Equality at the precise moment when the comely nurse was applying a hot foment to the carbuncle on his derriere. Yet, here they were — the carbuncle with its teeming billions of bacteria and the slogans of the French Revolution for which thousands have shed their blood behind the barricades. Where was the connection?

Could the writer, perhaps, have been thinking of the evils of Modern Society comparing them to a festering sore, while his subconscious mind invoked noble ideals from a glorious past? Not very likely, for no man with a septic posterior harbors feelings benevolent or otherwise toward society. Indeed, the writer could not care less. "Après moi le deluge" he would have echoed Louis XIII — "after me—State Medicine."

Was it an association of ideas by dint of rhyme — the sight of the young unmarried primigravida across the hall evoking the triad of "Puberty, Maternity, Morality?" Hardly, for the writer is a serious minded man not given to levity and the low humor of limericks.

It is, perhaps, best to leave the futile task of excavating the murky depths of the subconscious to the Analyst.

Whatever the cause of their incongruous appearance at the bedside may have been Liberty, Fraternity and Equality did not seem to be in a hurry to leave. Why did they tarry? Could they have been seeking escape from the hypocrisy of the outside world in the confines of the sick room? Did they, tired of lip service and abuse, seek asylum in the world of disease? Did Liberty look for self-realization in the freedom of the hospital, freedom from the tyrannies of home, work and responsibility? Did Fraternity try to find self expression in the brotherhood of disease — the brotherhood of paraplegics, multiple sclerotics, diabetics, alcoholics, chronic rheumatics, banded in their respective societies? Did Equality aspire to self-fulfilment in the sanctuary of the hospital where everyone is equal in the public ward?

Alas! poor noble slogans. If they entertained these fond hopes, they were in for bitter disillusionment. A close second look would have soon convinced them that they could fare no better in the Mundus Morbi than in the world of the healthy. Liberty will find freedom thwarted by stern surgeons, pedantic physicians, nagging nurses and insistent interns. Fraternity will find the brotherhood of the public ward scorned by the well-to-do, who prefer the solitude of the private room.

Equality will find frustration at every turn for nowhere, is there more inequality than in disease. The common cold has been common and plebeian for centuries, while gout has been a disease of distinction ever since good food and good wine marked the man of quality. Leprosy has been the disease of the outcast, whereas tuberculosis carried an aura of romantic wistfulness. "Weak" heart and "delicate" constitution commanded respect, and sympathy, but not so Acne Vulgaris. Syphilis and gonorrhea were and still are the great unmentionables.

The inequalities of disease become all too obvious during conversation at the dinner table. Here it is not only etiology and pathology, but topography that set the tone and assign the social status. Hemorrhoids, fistulae in ano, pilonidal sinuses are definitely out. Intestines are in bad taste. Stomach is borderline. Liver, on the other hand is definitely in. It was until recently the most fashionable of organs. To feel liverish was the privilege of the aristocrat. Kidney, although not on par with liver, is acceptable. Thyroid is welcome. Not so the uterus. Many a woman will proudly display her thyroidectomy scar, but how many would boast about a hysterectomy?

Yes, the inequality of disease is striking. To this, the writer can bear personal testimony, for he had a unique opportunity of observing it from within. Only a few short months ago he underwent surgery for a condition which ranks high in the hierarchy of affliction — the lumbar disc syndrome. How well he remembers the glorious days that followed the operation. The sick room filled

with the fragrance of roses . . . lilies of the valley, tulips, daffodils, carnations gracing the tables and window sills, competing for space with countless boxes of chocolates, confections, fruit . . . Stacks of greeting cards, "get well soon" cards, and cards that had to be hidden quickly from the prying eye of the suspicious wife . . . books numerous to fill a library . . . Visitors stumbling over one another, crowding the room, overflowing into the hallways, vying with each other in expression of sympathy.

Sic transit gloria . . . How different it is now! Humiliation in the wake of glory. It is the same hospital, the same patient, the same nurse, but the disease has changed—no longer the aristocratic disc, but a plebeian carbuncle. Now the room is empty devoid of all but bare necessities. Absent are the flowers, the candies, the books and the greeting cards. Gone are the visitors. The grim unsmiling nurse, the only representative of the human race in the room for days, makes no secret of the fact that only a strong sense of dedication to duty is responsible for her presence. Loneliness and despair are the sole companions of the poor victim of the micrococcus pyogenes.

Such is the sad fate of Equality in Sickland. Along with her sisters—Liberty and Fraternity she has found it just as difficult to adjust to the world of the sick as to the workaday world of the healthy, proving again that the difference between the two worlds is more that of degree than of kind.

Abstracts from the Literature

The Fate of Esophageal Varices in Cirrhosis Following Surgical Portal De-Compression. Palmer, E. D., *Gastroenterology*, 32, 5, 861-866, May, 1957.

Portacaval shunt in long term effect is far more effective than splenorenal shunt in reducing portal hypertension secondary to cirrhosis and in permitting esophageal varices to disappear. Although splenorenal shunt produces good immediate results, after about 6 months there is a return towards the preoperative state. Without operation, the varices of the cirrhotic patient may disappear spontaneously, but there is probably a return in all cases as time goes on. Esophageal varices secondary to cirrhosis are vacillating structures, influenced by a head of portal pressure which is constantly changing. Variations in portal pressure continue following surgical portal decompression but at much reduced levels.

A. G. Rogers.

Current Indications for the Surgical Correction of Mitral Stenosis. Black, H., and Harken, D. E., *American Heart Journal*, 53: 439-446, March, 1957.

Incorporating observations based on experience with over 1,000 cases of valvuloplasty for mitral stenosis, the authors review the current indications

for surgery. Progress in diagnosis and management has enlarged the number of cases amenable to surgery, and reduced the operative mortality to less than 1% in patients who have not reached the stage of irreversible cardiac failure. Patients are separated into 4 groups, grading from asymptomatic mitral stenosis to terminal irreversible congestive failure.

Factors previously considered relative contraindications are reviewed. Age over 50, auricular fibrillation, moderate mitral insufficiency, associated valvular disease, calcification of the mitral valve, and suggested rheumatic activity, are no longer in themselves deterrents to surgery.

Factors which strongly point to the need for surgical intervention are discussed. These include episodes of congestive failure, radiologic evidence of pulmonary hypertension, ECG evidence of right ventricular hypertrophy, auricular fibrillation, difficulty with sexual intercourse, repeated arterial embolization, and severe symptoms from mitral stenosis in pregnancy.

The authors stress the importance of careful follow-up in cases of asymptomatic mitral stenosis. They urge the consideration of surgery for all cases of symptomatic mitral stenosis, as the risk of operation is less than the danger of the disease, while the mortality rate of surgery markedly increases as the patient deteriorates into later stages.

V. M. Storrie.

Clinical Evaluation of a New Oral Anticoagulant "Sintrom." Neill, E. C., Moon, R. Y., and Vander Veer, J. B. *Circulation* 15: 713-719, May, 1957.

The authors report a year's experience using a new anticoagulant of the coumarin series, nitrophenyl-acetyl-ethyl-4-oxycoumarin, commercially known as "Sintrom." One hundred and fifty-six patients with thrombo-embolic disease were treated.

It was found that Sintrom produced a therapeutic hypoprothrombinemia in 36-48 hours. Therapy was initiated using 28 mg. the first day, 18 mg. the second day. Maintenance doses required varied from 2 to 12 mg., average daily dose 5.9 mg. Dosage schedule was guided by daily prothrombin times, and these investigators consider the therapeutic range as 10 to 30% of prothrombin activity. Sintrom was found to exert its maximum effect for 15-20 hours, so that only one dose daily was required. Hemorrhagic complications due to excessive hypoprothrombinemia were corrected by omitting a day's therapy, or by intravenous administration of vitamin K₁. The omission of only one dose resulted in a return toward normal. Dosage requirements were relatively constant in any given patient.

Sintrom is compared to Tromexan and Dicumarol, and the authors consider it a more nearly ideal anticoagulant than other coumarin and indanedione derivatives.

V. M. Storrie.

Therapeutic and Toxic Indexes of Digitalis. A comparative study of Gitalin and Digitalis Leaf. Bryfoyle, J. W., Santilli, T., Saltzman, H. A., and Bellet, S. *New England J. of Med.* 256: 767-773, April 25, 1957.

Owing to conflicting reports regarding decreased toxicity of gitalin, the water-extractable substance of digitalis purpurea, the authors attempted experimental and clinical studies to compare gitalin and other glycosides. Animal experiments indicated that gitalin is less potent than the purified glycosides in common use, although results of studies in animals are not directly applicable to man.

In the clinical investigation, gitalin and digitalis leaf were administered to patients with atrial fibrillation, both substances being used successively in the same individuals. In potency, 0.5 mg. of gitalin proved approximately equivalent to 0.1 gm. of digitalis leaf. Observations of heart rate were made at rest, after exercise, and after atropin injection. The onset of effect was $\frac{1}{2}$ - 2 hours following a single oral dose of 3.5 - 5 mg. gitalin, with a maximum effect in 12 - 24 hours. Maintenance dosage requirements varied from 0.25 to 1.5 mg. gitalin. The criteria of toxicity was the development of premature ventricular contractions or other arrhythmias in the electrocardiogram.

There was no demonstrably wider therapeutic range of gitalin compared with digitalis leaf. In any one individual increased or decreased toxicity of either preparation was accompanied by increased or decreased potency.

V. M. Storrie.

Surgical Treatment of Cancer of the Cervix Recurrent After Previous Radiation Therapy.

Alexander Brunschwig and William W. Daniel, S. G. & O., 105: 2, August, 1957.

These eminent protagonists of ultra radical surgery discuss the problem of the treatment of radiation failures in cancer of the cervix. In their opinion, the incidence of radiation failures is much higher than the 55 to 60 percent reported by some centers. Renewed radiation is disappointing in its results and has a high incidence of morbidity. Because of the tendency for cancer of the cervix often to remain localized to the pelvis for relatively prolonged periods, there must be an appreciable percentage of patients constituting radiation failures, who go through a period when the disease progresses locally for a time before metastases at a distance occur. These are the cases where well chosen surgery can be expected to raise the salvage rate.

All of the cases presented had histologically proven recurrences, and only those in whom the disease was apparently limited to the pelvis were approached in a "curative" attempt. The extent of the resections was decided according to the needs; these fall into two groups:

Non-exenteration operations: 30 patients underwent radical procedures short of exenteration

which were thought to be potentially curative. Seventeen of these patients were alive five years later; a salvage rate of 57%.

Exenteration procedures: In ten patients an anterior exenteration was considered adequate; two of these lived for five years or more, a salvage rate of 20%.

Thirty-two patients underwent complete exenteration in the hope of arresting their disease; six of these survived more than five years, a salvage rate of 19%.

Grouping all these together; 72 consecutive patients in this series who had recurrent cervix cancer after radiation therapy underwent "curative" types of operations six months or more after radiation therapy. The overall operative mortality was less than 13% and the salvage rate was 35%.

This report should help correct the attitude of absolute hopelessness which has prevailed in face of radiation failures. These procedures are no longer "experimental surgery" but offer the patients a last chance of a cure for a worthwhile percentage of them.

Andre Molgat.

The Secretary and Clinical Aspects of Achlorhydria and Gastric Atrophy as Precursors of Gastric Cancer. Hitchcock, C. R., and Sullivan, W. A., *J. Nat. Cancer Inst.*, 18, 795, (June) 1957.

Mild or patchy mucosal atrophy can be found in stomach of well patients, occasional patients with duodenal ulcer, and patients with extra gastric malignancy. There is a much higher correlation of severe gastric mucosal atrophy in patients with gastric cancer than in other groups (except pernicious anemia patients). Large numbers of people have been screened for achlorhydria and hypochlorhydria. By limiting gastric roentgenograms to those over 50 who are achlorhydric or hypochlorhydric, about 6½% of the over all population must be studied repeatedly to detect the greatest number of asymptomatic gastric cancers. If all other screening techniques had been omitted, except examinations for achlorhydria and hypochlorhydria, no gastric cancer would have been undetected. A 4.5 times increase of gastric cancer in the achlorhydric-hypochlorhydric group, and a 21.9 times increase in the pernicious anemia group has been found, as compared to the normal population over 50 years of age. The value of screening by the method of age, hypochlorhydria and achlorhydria has been confirmed by the lack of development of gastric cancer in a large number of normochlorhydric people. It is believed that those people with pernicious anemia should have gastro-intestinal series at 6-month intervals, and those with achlorhydria or hypochlorhydria at 9-12 month intervals. There is reasonable assurance that many more gastric cancers can be detected in the pre-symptomatic phase of the disease. Other tests of achlorhydric persons (Schilling test) may lead to

further refinements of groups that require repeated study to detect gastric cancer.

Arnold G. Rogers, M.D.

♦
Host Resistance to Cancer in Relation to Prolonged Survival Following Radical Surgery. Alexander Brunschwig, S. G. & O. (105:2) August, 1957.

It is accepted that cancers evolve at different rates in different patients and this is not necessarily closely related to sites of origin and cell types. Numerous theories have been advanced in an attempt to explain these phenomena, but they are all in the hypothetical stage.

Washings from the wounds after operations for cancer, particularly in large and prolonged procedures, have demonstrated the presence of viable cancer cells in a high proportion of cases. Theoretically local and wound recurrences should occur in all such cases.

The explanation for the good results would seem to be that the organism has some degree of resistance to the growth and invasion of cancer cells. Host resistance to cancers has been demonstrated in laboratory animals. The same phenomenon must exist in man. Admittedly these mechanisms must be feeble but they supply the only explanation for prolonged survival following extensive resections for cancers involving multiple organs. Spontaneous recessions of cancer in man have been observed in rare, but in well authenticated cases. Prolonged control of cancers where

the primary growth and distant metastases were removed operatively have been repeatedly observed. All these point to the presence of some development of resistance to cancer cells by the host.

The immunologic aspects associated with the growth of cancer constitutes a specific aspect of the cancer problem that fits in well with a viral etiologic factor. It is to be hoped that research into this aspect of cancer behaviour will lead to the development of methods of enhancement of this natural defense mechanism in man.

Andre Molgat.

♦
The Treatment of Active Chronic Infectious Hepatitis with ACTH (Corticotrophin) and Cortisone. Last, P. M., M.J. Australia, 44, 672 (May) 1957.

A small number of patients with acute infectious hepatitis pass into the active chronic phase of the disease. The therapeutic effects of prolonged ACTH and cortisone therapy have been studied in 9 such patients, for periods from one month to three years. Dramatic recoveries cannot be expected. Assessment was made of subjective benefit, improvement in liver function tests, and of histologic appearance of the liver. 8 of the 9 patients promptly improved symptomatically. There was little change in the histologic appearance. One patient appears to have recovered completely, 2 showed moderate improvement, 3 have shown little or no benefit, and 3 patients died.

Arnold G. Rogers, M.D.

Book Reviews

The Riddle of Stuttering. by Bluemel. The Interstate Publishing Co., 137 pp.

In the last paragraph of this book, (p. 134), the author admits that much remains to be done in the field of disturbed speech. However, the title of chapter Eleven is: "The Answer to the Riddle—in Summary." This reviewer doubts very much that this book is the answer. Its message, one gathers, is directed towards the speech therapist or the stammerer who wishes to treat himself. It is based on "the concept that talking is thinking out loud and that the mind broadcasts to the mouth." Essentially then, the aim is for the patient to acquire patterns of normal speech. A similarity is drawn between learning a foreign language by listening to phonograph records until one becomes familiar with the words and phrases, and then they automatically come to mind when needed. There are various manoeuvres described whereby the patient acquires smoother thinking habits under circumstances which previously had been found difficult. The author does not give any figures as to how effective his form of therapy is. No references are given and presumably the method is original with the author.

For the medical reader this is an irritating book. For example, psychoneurosis is defined as "a nervous illness marked by disorganization,"—hardly an acceptable definition. Granted that psychiatric terms are used here for a non-psychiatric audience, but it does not make for clarity to use these words in their loose, every day meaning. For example, the stutterer is said to be a person who is easily "confused." There is a short glossary at the end of the book, and the definitions given have little relationship to the definitions given in a medical dictionary. Paranoia is defined as "delusional insanity."

There is little said about psychotherapy. There is some suggestion that the total personality may be involved in stuttering, but methods for dealing with this aspect, consist of such measures as: giving sedation, sleeping-in weekends and developing habits of acting more decisively in day to day living.

There are, certainly, preferable treatments to the one described on p. 113, for the disorganization of the speech which occurs in a child, after having experienced a shock or a fright. The author suggests a modified form of sleep therapy in which

the patient sleeps twelve hours a day. The suggestion is made that the patient should sit up several times through the day and breathe deeply in order to ventilate the lungs. It is pointed out that this ventilation procedure has nothing to do with speech, but it prevents congestion of the lungs which sometimes results from shallow breathing during the period of sedation. Other, but equally weak recommendations, are made regarding carrying out this regime. Difficulty with speech, of this kind, is quite a common thing in adults and children and requires no treatment as such. It is a symptom either of an anxiety state or hysteria, and requires the appropriate treatment for these conditions. Furthermore, since this book seems to be directed to a non-medical audience, an attempt at describing prolonged sleep therapy is out of place.

It is apparent from his book that the author is extremely interested in speech therapy and probably has a good deal of experience with it, but it seems to this reviewer, that this is only one other ritual of treatment which attempts to deal with this obscure problem.

J. M.

Surgery — Principles and Practice. J. Garrott Allen, M.D., Professor of Surgery, University of Chicago; Henry N. Harkins, M.D., Ph.D., Professor of Surgery, University of Washington, Seattle; Carl A. Moyer, M.D., Bixby Professor of Surgery, Washington University, St. Louis; Jonathon E. Rhoads, M.D., D. Sc., Professor of Surgery, University of Pennsylvania, Philadelphia, and twenty-eight contributors. Publisher, J. B. Lippincott & Company.

This excellent book is a major contribution from thirty-two American surgeons. It is sure to win a prominent place in surgical literature. The authors are drawn from many famous American medical colleges and they present their balanced and well documented ideas without bias or dogmatism. The book represents American Surgery from Boston to Seattle and Ann Arbor to Tennessee. Much attention has been given to the physiologic, biochemical, pathologic and anatomic bases of surgical practice. Perhaps these aspects of surgery are the American contribution to Surgery. In the past

great surgeons of Britain and Europe contributed brilliantly to the techniques of Surgery. American surgeons have, and are, contributing thusly in the fields of neurosurgery and cardiovascular surgery. Nevertheless, future generations will look back on the present era and record that American Surgeons established the importance of basic scientific knowledge for their trainees and saved the surgical specialties from degenerating into techniques. This book will assist many present and future students in their basic training. Many aspects of non-operative surgery are covered. There are chapters dealing with the usual pre and post-operative care. In addition, there are chapters covering subjects such as isotope techniques, renal function and oliguria, edema, endocrinology and radiation injury.

The fact that a surgeon must be an astute diagnostician and clinician is not neglected and the clinical pictures of the various surgical diseases are well drawn. The special investigations applicable to each problem are presented and their interpretations, valuable or misleading, are discussed. In presenting treatment the authors are careful to avoid excessive dogmatism and the student learns he is studying a dynamic subject, that he must avoid the prejudiced and closed mind to which we are all susceptible.

If one searches for points to criticize they can always be found. In the management of the patient with phlebothrombosis the author advocates dicumarol. The reviewer believes this drug should be abandoned in favor of newer and more quickly reversible anticoagulants. In the management of the patient with a palpable appendiceal mass the author deviates from the expectant treatment. A recent review of all deaths from appendicitis during the past seven years in this center has convinced the reviewer that the patient with a palpable appendiceal mass is still best treated expectantly. However, these criticisms are inconsequential in the face of the monumental work. The text book is highly recommended for all undergraduates and residents in training. It is a valuable and extensive refresher course for those practising general surgery. The narrow specialist well up in his own field will find it valuable in educating him in the rest of surgery.

Robert L. Cooke, M.D.

Accuracy . . .

The technique of craftsmanship as we apply it to your prescription, is a guarantee of accuracy.

Mallon Optical

405 Graham Ave., Winnipeg 1

Phone WH 2-7118



Social News

Reported by K. Borthwick-Leslie, M.D.

1958!! Starting off late, too with my column—being thoroughly cursed by the printer and manager. Apology accepted I hope, but the festive season turned out to be anything but festive. Ye son arrived home in time to go to bed with 'flu, so now I know why nurses charge so much for eight hour duty. What does one do on 24 hour combined nursing and physician duty? No sleep, no profit, no fun at Christmas and New Year's!

While in an apologetic mood, apparently last month I got all mixed up with the Hollenbergs. At least now I **know** people read the column. Mike phoned me, Dorothy wrote me, so now I also know that Dr. Joan '55 is daughter of Dr. and Mrs. Mike—and is doing post graduate in Ophthalmology in the Presbyterian Hospital in New York, her husband also doing P.G. work.

Dr. Joanna, daughter of Drs. Dorothy and Jo, now Dr. Joanna Shen, B.A., M.D., and B.Sc. in Medicine is doing Pathology at King's County Hospital, New York, where her husband is resident in Psychiatry.

So you see our "Fimmels" are carrying on, what's more I repeat, please give with those details of our graduates and help Bob Cook out in his Anniversary itinerary organization. He has a tough responsible job to do.

Dr. and Mrs. Michael G. Saunders are now proud to be of Canadian citizenship, and Dr. Saunders is the first Canadian to hold the Diploma of the Board of Qualification of the American E.E.G. Society. Also he has been appointed to the National Medical Advisory Board of the Multiple Sclerosis Society, succeeding Dr. A. T. Mathers who recently retired from the position.

Congratulations, and all best wishes for success, Dr. Saunders, from the Bulletin.

Dr. Charles M. Burns, M.D., F.R.C.S. (C) announces his practice restricted to General Thoracic and Traumatic Surgery, 232 Medical Arts Bldg., Winnipeg.

Ultra photogenic local doctors attending the Physicians and Dentists course at the Canadian Civil Defense College, Arnprior were Drs. F. H. Smith, M. J. Swartz and L. R. Rabson. In the excellent picture I couldn't be sure from Rab's profile whether the concentration was on Advance Treatment equipment, or the demonstrator.

Dr. J. Gordon Hunter, who has been assistant to Dr. Emmet Dwyer, C.N.R. Regional Medical Officer, has been appointed Senior Medical Officer in the Vancouver division, as of Jan. 1. Gordon graduated in 1942, and after a tour with the R.A.M.C. from '43-'46, did post graduate study in Internal Medicine, receiving his certification in '54. He joined the C.N.R. in '51. Have not been officially notified but my grape vine reports that Dr. R. Baker of Brandon has moved into the C.N.R. vacancy.

Congratulations to Dr. Mark Nickerson, Department of Pharmacology and Therapeutics on being awarded a grant of \$7500 from Smith, Kline and French in support of his research studies in "shock."

I got quite a kick out of Dr. and Mrs. Harry Portnuff's (Yorkton, Sask.) film show of touring through Mexico.

Harry, classmate of mine, has become quite the camera fiend and expert, and Anne, a Mordenite old friend is as charming and vivacious as ever.

Dr. and Mrs. R. P. Cromerty of Brandon announce the engagement of Roberta Jean to Mr. Philip M. Matthews, Winnipeg, formerly of Bath, England. The wedding Jan. 25th in Brandon, Man.

December 20, 1957, St. Luke's Anglican Church was the site of the marriage of Janet Elizabeth, daughter of Dr. and Mrs. Cherry Bleeks to David Buchanan Beeman, son of Mrs. H. H. Beeman and the late Mr. Beeman, K.C. of Fort William.

Attending the bride were her sisters Nancy and Carolyn, with Susan Nancekivell, niece of the bridegroom, as flower girl. Philip Bleeks, brother of the bride, with Paul Pickard, Clifford McAuley and Keith Stewart were ushers. Following a reception at the home of the bride's parents, the young couple left for a motor trip to Minneapolis and Fort William. They will reside in Winnipeg.

December 18, Cynthia Josephine Adamson, only daughter of Drs. Emma and Gilbert Adamson, in a beautiful wedding ceremony in St. Paul's Anglican Church, Fort Garry, became the bride of Martin Herst Ainley, formerly of Huddersfield, England. The junior choir was in attendance.

Carol Smith, daughter of Dr. and Mrs. Hartley Smith, and Gail Greenlay, classmates of the bride at the Winnipeg General Hospital were bridesmaids. Dr. John Adamson, Montreal, was best man and Dr. Kirk Osterland assisted in ushering the guests.

After the wedding reception at the Manitoba Club, where Dr. Ken Trueman excelled himself in toasting the bride, the young couple left for Montreal prior to sailing for England and the continent.

They will return for the fall school term, as Mr. Ainley has accepted a teaching post at St. John's Ravenscourt School.

December 29, in the Shaarey Zedek Synagogue, Elinor Ruth, daughter of Dr. and Mrs. Harry Medovy, exchanged wedding vows with David Lyon Rothberg. Attended by her sister Nancy and cousins, the bride was beautiful in a gown of hand clipped chantilly lace. Mr. and Mrs. Rothberg will reside in Winnipeg.

To the new parents, congratulations:

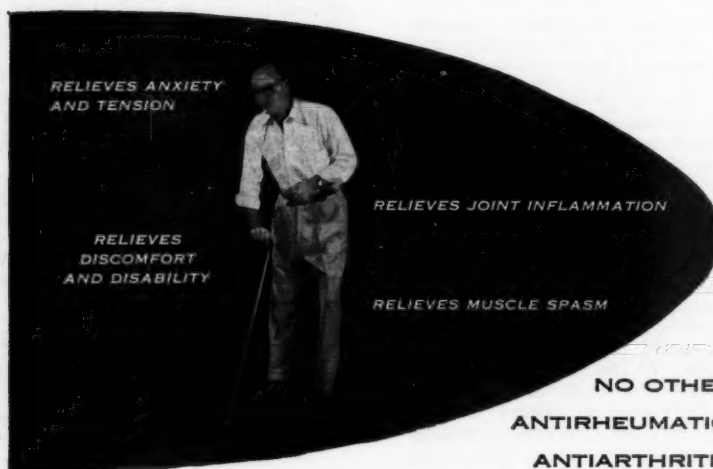
Dr. and Mrs. Kirk Osterland (nee Jane Wallace) welcome Kathleen Margaret, born Nov. 28, 1957.

Dr. and Mrs. C. Lavoie announce the birth of their second son, Dennis John, Jan. 1, 1958.

Dr. and Mrs. J. F. Choate, Steinbach, Man., are happy to announce the arrival of Catharine Wynne, Dec. 5, 1957.

Dr. and Mrs. J. Bryson Murray, Carberry, Man., welcome Karen Leigh, Dec. 16, 1957, baby sister for Daine.

January 6, 1958, Dr. and Mrs. Edward C. Shaw happily announce the birth of a sister for Janet, 7 lbs. 5 oz.



NO OTHER
ANTIRHEUMATIC,
ANTIARTHRITIC
PROVIDES AS MANY
BENEFITS AS

MULTIPLE COMPRESSED TABLETS

'MEPROLONE'

MEPROBAMATE
PREDNISOLONE, buffered

THE ONLY

ANTIRHEUMATIC,
ANTIARTHRITIC

THAT SIMULTANEOUSLY

RELIEVES:

1. MUSCLE SPASM
2. JOINT INFLAMMATION
3. ANXIETY AND TENSION
4. DISCOMFORT AND DISABILITY

Each Multiple Compressed Tablet of 'MEPROLONE' provides the antiarthritic, antirheumatic benefits of:

1. *Prednisolone buffered*—the newest and most potent of the "predni-steroids" for prompt relief of joint pain and arrest of the destructive inflammatory process.

2. *Meprobamate*—the newest and safest of the muscle-relaxant tranquilizers—relaxes accessory musculature in spasm—eases mental tension and anxiety, so often manifest in patients with rheumatic, arthritic disorders.

Indications: Rheumatoid arthritis, rheumatoid spondylitis, Still's disease, psoriatic arthritis, tenosynovitis, myositis, fibrositis, intractable asthma, respiratory allergies, allergic and inflammatory eye and skin disorders.

Dosage: 1 or 2 tablets 3 or 4 times daily.

Supplied: Multiple Compressed Tablets in bottles of 100 in two formulas as follows: 'MEPROLONE'-1—1.0 mg. of prednisolone, 200 mg. meprobamate and 200 mg. dried aluminum hydroxide gel. 'MEPROLONE'-2—provides 2.0 mg. of prednisolone in the same formula.

• 'MEPROLONE' is a trade-mark of Merck & Co. Limited



Merck Sharp & Dohme Montreal 30, Que.
Division of Merck & Co. Limited

Medical History

Dr. Alex. J. Douglas

1874 - 1940

Ross Mitchell

The city of Winnipeg owes much to its first whole time medical health officer. For thirty-nine years he was the conscience of Winnipeg in public health. He faced the forces of ignorance, superstition, indifference and greed with quiet tact and firmness and won great victories.

He was born April 28, 1874, in Erkfrid, Ontario. At an early age he moved with his parents to Winnipeg where his father became owner and manager of the Leland hotel. He was known as "Cap" Douglas, probably because he had served in the American Civil War. Alex was educated in Winnipeg schools, Manitoba College, (M.D.C.M. 1897). Then followed post-graduate work at McGill and in London, England. On his return he engaged briefly in private practice until in 1900 he applied for post of whole-time medical health officer. There were twenty-five other applicants but he won out.

Winnipeg in 1900

In many ways Winnipeg was then a pioneer city of 45,000 people. Only twenty-seven years earlier it had been incorporated when its population was under 3,000. The main streets in 1900 were paved but the paving was cedar blocks or macadam. Many houses had neither water nor sewer connections. Outdoor privies were many and in summer flies and mosquitoes abounded. The water supply was from artesian wells in the north-west part of the metropolitan area. Though the water was exceptionally pure and palatable, it was so hard that it clogged boilers and large industries had to have other supplies of water. Moreover the wells tapped an invisible basin so that the supply was variable and uncertain. Milk came from many small dairies of questionable cleanliness and was retailed in bulk. There was no pasteurization. Infant mortality was high; typhoid fever, tuberculosis and infectious diseases were rife. There were only two general hospitals, Winnipeg and St. Boniface, each with an infectious diseases section. Laxity regarding smallpox vaccination prevailed, and as yet inoculation against scarlet fever, diphtheria and whooping cough had not been discovered.

Baseball and Smallpox

The young health officer had to weigh many factors in the situations presented to him. In 1909 Winnipeg had a professional baseball team of which it was proud. Spring was in the air and the season was about to start. The team had arrived after playing exhibition games, the last at Brandon. There had been a procession led by a brass band

with carriages conveying the team, the mayor, aldermen and other dignitaries. The next day the pitcher who had pitched at Brandon was ill and a young doctor was summoned. The pitcher had severe backache but there were two or three shotty papules on his wrists and a red spot on his forehead. It looked like early smallpox and the doctor called in Dr. Douglas, who confirmed the diagnosis. What to do? He solved the dilemma by transferring the patient to the city pest house near Brookside cemetery, other players were vaccinated and were allowed to play but instructed to stay at all other times in their hotel until it was clear that no other cases would develop. Strict secrecy was enjoyed, the press was kept in ignorance, the games at River Park went on, the club was not ruined and everyone was happy.

Typhoid Fever

His greatest victory was against typhoid fever, the great scourge of the city. It was not peculiar to Winnipeg, indeed Osler's "Principles and Practice of Medicine" begins with that disease but in 1903, 1904 and especially in 1905, typhoid reached epidemic proportions. In the latter year one thousand six hundred and six cases were reported. The incidence of the disease in Winnipeg would rise sharply in the latter half of August, rage through September and October and diminish with the coming of frosts. In each of those years hospital superintendents would put in extra beds, at times placed in corridors so closely that a nurse or doctor could scarcely pass between them. In 1905 the Winnipeg General hospital had to open an emergency hospital in the British Columbia building on the exhibition grounds on Dufferin Avenue. There were 138 deaths from typhoid, mostly in young people. A spectacular fire which destroyed the Bulman and Ashdown buildings on Bannatyne Avenue, threatened to exhaust the water supply. Valves in the old pumping station by Maryland bridge were opened to allow water from the Assiniboine into the mains. A high number of cases were reported in the area between Kennedy Street, Portage Avenue and the rivers. Dr. Douglas advised that Dr. Edwin O. Jordan of Chicago be called in to investigate and report. Dr. Jordan recommended that outdoor privies should be done away with in the city limits, that sewer connections be made compulsory wherever possible, and that every effort be made to reduce the number of flies which acted as carriers. Mr. Allan Hazen, who had been brought in as a sanitary engineer, reported on the sewage system. The recommendations were effected and within two years the number of cases fell to 387. In 1938 only seven cases were reported though the population had doubled and now the disease is almost unknown in the city.

Shoal Lake Water

A supply of pure soft water for a Metropolitan area which might increase to one million was required. Dr. Douglas recommended that it should be obtained from the Lake of the Woods which because of its size, its rocky basin and the scanty population in the area was never likely to be contaminated. That source had the further advantage of height so that if an aqueduct were built, water would flow by gravity. Shoal Lake, an arm of Lake of the Woods, was selected, a concrete aqueduct was completed in 1919 and water has been flowing continuously since then.

The Sewage Disposal Plant

Largely on the urging of Dr. Douglas and his good friend, Dr. Gordon Bell of the Manitoba Board of Health, intercepting sewers were built leading to a sewage disposal plant north of the city, which was completed in 1938. No longer was raw sewage dumped into the rivers. It was treated at the plant and the clear and inoffensive effluent is returned to the Red River.

Tuberculosis

In 1908 a World Conference on Tuberculosis was held in Washington D.C. Dr. Douglas attended on behalf of the city and reported to council on his return. He recommended tuberculin testing of dairy animals and pasturization because the conference had decided that animal tuberculosis was transmissible to man. Further he advised that a provincial sanatorium should be built and a city dispensary be opened. The Manitoba Sanatorium was opened at Ninette in 1910, and instead of a dispensary the city built first a wooden hospital and then the King Edward hospital at the foot of Morley Avenue. So marked has been the decline in tuberculosis that the King Edward hospital is no longer required as a sanatorium but is now used for elderly chronic patients.

Scarlet Fever

In 1910 there was an outbreak of scarlet fever. It was necessary to open an emergency hospital in the main exhibition building. On October 19, the wooden structure caught fire and was soon demolished. Forty-four patients, mostly children were in the building but the nurses and orderlies quickly removed them to shelter beneath the grandstand. Within an hour they were in the Winnipeg General hospital. The Governor General of Canada sent a telegram congratulating Miss Victoria Winslow, the head nurse, and her staff. The city bought the private hospital of Dr. Beath on Bannatyne Avenue. This was the first municipal hospital other than the smallpox pest house. Within a year or two the King George hospital for infectious disease was built on the Morley site. About that time the Dick and Schick tests for

scarlet fever and diphtheria respectively were introduced, and this was followed by inoculation against these diseases. A free dispensary for diphtheria inoculations for children was opened in the basement of the city hall.

Health of Children

Efforts were made to reduce the high infant mortality. A system of city health nurses was set up and a milk depot was established in a building close to the Children's Hospital on Aberdeen Avenue. Medical inspection of school children was instituted under Dr. Mary Crawford and Dr. Elizabeth Matheson despite angry protests from an irate woman.

End of Career

His work, especially against typhoid, had become known through America. The American Public Health Association elected Dr. R. M. Simpson of Winnipeg president and Dr. Douglas second vice president and chairman of the section for municipal health officers. At a farewell luncheon on April 28, 1939, Dr. Douglas was presented with a desk set of Manitoba marble. When he retired in 1937 from the Medical Faculty from the chair of hygiene, which he had held since 1905, he was appointed Professor Emeritus and had conferred on him the LL.D. degree. When the Royal College of Physicians and Surgeons of Canada was instituted he became a charter member in 1931. He died on June 30, 1940, a year after retirement, leaving a widow, nee Lynette Fairchild and a daughter Frances.

The Man Himself

His second home was the Manitoba Club, for he had a rare gift of companionship and was an excellent raconteur. He was modest, unassuming and scornful of publicity. He never owned a motor car and when he ceased to ride his bicycle it was carefully stored in his basement office in the City Hall together with his old straw hats. Shortly before his death his excellent collection of Canadian postage stamps was sold to the well-known dealer, Mr. K. Bileski of East Kildonan. Dr. Douglas read every available book dealing with the American Civil War; he admired Abraham Lincoln and made a pilgrimage from Ford's Theatre in Washington D.C., where the President was shot, to the barn in Bowling Green, Virginia, where his assailant, Wilkes Booth, was surrounded and killed. He loved golf and classical music.

The writer is grateful to Mr. Isaac Pitblado, Q.C., and Dr. Morley Loughheed who succeeded Dr. Douglas, for personal reminiscences, to Mr. A. G. Laurence, former city statistician, and Mr. Claude Hargrave of the City Health Department for information and statistics and to the Free Press Librarian.

Association Page

Reported by M. T. Macfarland, M.D.

Northwestern District Medical Society

A meeting of the Northwestern District Medical Society was held in the hospital at Roblin at 3 p.m. on the afternoon of Thursday, December 5th, 1957.

Present were: Drs. W. A. Large, Roblin, President; J. W. G. Korwan, Roblin; M. K. Brandt, Dauphin; M. Potoski, Dauphin; B. E. Symchych, Dauphin; J. R. Monteith, Virden; D. E. Yates, Virden; J. E. Hudson, Hamiota; W. K. Hames, Kenton; H. N. Lange, Russell; T. W. Shaw, Russell; H. Crossley, Yorkton; S. C. Houston, Yorkton; J. E. Isaac, Winnipeg; M. T. Macfarland, Winnipeg; R. T. Ross, Winnipeg.

The scientific program consisted of presentations of Disseminated Sclerosis and Parkinson's Disease cases which were discussed by Dr. R. T. Ross, Winnipeg, and a discussion of Gall Bladder Disease by Dr. J. E. Isaac, Winnipeg. Films secured from Dr. H. Jenkins, Chicago, Illinois, and the Mayo Clinic, Rochester, Minn., added greatly to the latter presentation.

Dr. J. E. Hudson, Past President of the Manitoba Medical Association, discussed the present status of the national hospitalization bill.

At the brief business meeting which followed the scientific presentations, officers for the year 1957-58 were elected as follows:

President: Dr. R. S. Harris, Virden.

Secretary: Dr. J. D. McMillan, Oak River.

Representative to

M.M.A. Executive: Dr. W. K. Hames, Kenton.

Following a social hour at the home of the President, Dr. and Mrs. W. A. Large, twenty-four persons, including Dr. and Mrs. Stuart Houston and Dr. H. Crossley, Yorkton, sat down to a delicious turkey dinner in the Nurses' Dining Room of the Hospital. Appreciation for the meal was extended to the Matron, Mrs. Maier, and staff.

Northern District Medical Society

The quarterly meeting of the Northern District Medical Society was held at the Swan River Hospital on Saturday, November 16th, 1957. Icy roads delayed the arrival of Dauphin members and the visiting team, but several interesting cases were presented at ward rounds, namely, Pleurisy with effusion following influenza in a young adult female; Conservative surgery in an elderly male diabetic; care and rehabilitation following gasoline burns in a young lad. Tuberculoma in a female patient who had previously spent two years in a sanatorium; Pre-admission decubitus ulcer in a patient who had been treated at home for hemiplegia (Rt); Post-influenzal nephritis in a young man.

A social hour was followed by a turkey dinner in the nurses' dining room for which appreciation

was expressed to the Matron, Mrs. Simms, by Dr. Jonat.

The Business and Scientific sessions were held in the Health Unit Classroom and were attended by the following: Dr. L. V. Jonat, President, Swan River; Dr. M. Potoski, Secretary, Dauphin; Doctors A. P. Cameron, J. L. Honig, B. Jonsson, T. F. Malcolm, and Matthews (Dentist) of Swan River; Dr. O. Hierz of Benito; Dr. F. J. Burgess of Dauphin, and Doctors J. M. Bowman, R. L. Cooke and M. T. Macfarland, of Winnipeg.

Minutes of the last meeting at Dauphin were approved as read. Election of Officers for 1957-58 resulted in the following selection: President, Dr. F. J. Burgess, Dauphin; Secretary, Dr. M. Potoski, Dauphin, who was also named representative to the Executive Committee of the Manitoba Medical Association.

It was agreed that the Manitoba Medical Association Executive Committee be requested to review the travel allowance granted to representatives from outside the Greater Winnipeg area, also that some representations be made of the need for clinical pathological services in the district.

Dr. J. M. Bowman, Winnipeg, outlined the history of the Asiatic Influenza outbreak, and listed the experience with some cases treated in Winnipeg hospitals.

Dr. R. L. Cooke, Winnipeg reviewed the anatomy and physiology of the Biliary Tree and discussed some of the operative and post-operative complications of Gall Bladder Disease.

In the absence of the President, Dr. C. B. Schoemperlen, Dr. M. T. Macfarland, Winnipeg, extended greetings from the Association and discussed some matters dealt with at the 1957 meeting or which will require attention of the 1957-58 Executive Committee. Mentioned were the Swan River Hospital By-laws; need for services of clinical pathologist in view of the possibility of a provincial hospitalization plan; study of relative value fee schedule by the Professional Policy Committee; a committee to review the organization of the Association with recommendations for revamping the Constitution and By-laws; a study of relations of the profession to the Workmen's Compensation Board; Annual Meeting of the College of General Practice, Winnipeg, April 1958; Canadian Medical Association Annual Meetings 1958 (Halifax) and 1959 (Edinburgh, Scotland), the latter in conjunction with the British Medical Association.

The visiting party left almost immediately after the meeting in order to make train connections for Winnipeg. The expert driving and hospitality of Dr. M. Potoski was greatly appreciated.

M. T. Macfarland.

PENICILLIN PLUS!

Oral BICILLIN is a penicillin of choice because it is synonymous with plus factors in penicillin therapy. It means assured penicillin absorption through its unique resistance to gastric destruction.¹ It means more prolonged action than soluble penicillins achieve.¹ It means penicillin *plus* delicious taste (Oral Suspension), *plus* convenience of administration (Tablets), *plus* the notable safety of penicillin by mouth.

For *all* these plus factors, prescribe Oral BICILLIN.

1. American Medical Association: New and Non-official Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

TABLETS

SUSPENSION

ORAL BICILLIN*

Benzathine Penicillin G (Dibenzylethylenediamine Dipenicillin G)

Penicillin with a Surety Factor

*Trade Mark

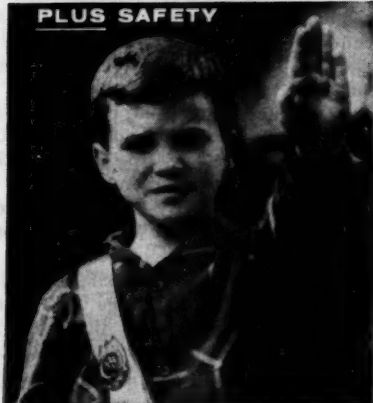
■ available on prescription only



PLUS CONVENIENCE



PLUS SAFETY



PLUS DELICIOUS TASTE



Keeping The Profession Informed

In the hope that the profession as a whole may be better informed concerning current activities of the Manitoba Division of the Canadian Medical Association, it is proposed that a more detailed account of committee activity be reported in this column. Members are invited to read, discuss, comment on, or submit questions on topics discussed, or those on which an opinion is desired.

The Canadian Medical Association, and the Manitoba Division have many topics which are discussed at federal and provincial, as at the local society level. The proceedings of the C.M.A. General Council, on which Manitoba Division had ten representatives, were published in full in the September 1st, 1957, issue of the Canadian Medical Association Journal, and an excellent report of the activities of the C.M.A. Executive Committee meeting held on November 1, 2 and 3, 1957, was reproduced on page 1046 of the same Journal for December 1st, 1957.

The reports of the Annual Meeting of our own Manitoba Medical Association, which name is synonymous with Canadian Medical Association, Manitoba Division, appeared in the November 1957 issue of the Review for perusal by those who were prevented from attending and securing a copy at the time of the meeting. They indicate, if not in chronological detail, the many facets of activity in which the Association is engaged. Interest and discussion were good.

Payment for Report Forms by Manitoba Hospital Service Association. At the Annual Meeting of the Association in October it was agreed, by resolution, that when pre-enrolment or report forms are requested from the medical practitioner by Manitoba Hospital Service Association, a fee of \$5.00 may be charged. The effective date of the resolution was October 15th, 1957, and notification was sent to "Blue Cross." At the subsequent meeting of M.H.S.A. Board on November 23rd, it was stated that while the fee might be paid once to the doctor, the onus of providing subsequent reports would probably be shifted to the policy holder. The initial fee will be paid only upon submission of an account by the doctor.



Report of Group Sickness and Accident Insurance Committee Submitted to the Executive on December 11th, 1957

We are now nearing the end of our 9th year of operation of the group of our sickness accident insurance, and as a good many of our members know it has evolved to become a very good plan of protection for the association.

However, though quite satisfactory this committee felt that an analysis of our method of operations should be made in an effort to determine whither we were going in our experience

with our group and certainly if at all feasible to obtain any such retribution that we could justify. It was with this in mind that we set out to study our present plan.

After considerable discussion amongst ourselves and then with the responsible officers of the insurance firm, certain facts were highlighted.

(1) That we are not a true group, but a gathering of individual members buying insurance together, therefore, buying insurance Bulk as it were.

(2) The insurance company concerned is still responsible for the individual sale of contracts and collection of premiums for these as in individual contracts.

(3) That providing we have an enrollment of over 50% our contracts are non-cancellable.

(4) Our claims experience has been very good in that all claims were honored.

(5) Our group strength has just managed to keep over the 50% enrollment.

Now in contrast to the previously listed, were brought out the following facts:

(1) Our claims during the past years of operation have averaged approximately 60% of the total.

(2) Approximately 20% is being retained as a reserve.

(3) 20% is submitted as a cost of operation of the plan listed as expenses.

Now in dealing with claims, our rate of 60% is better than the average experience of sickness and accident groups and now that we've been in operation this long, we expect it to be still better.

In dealing with the 20% withheld as a reserve, it is an arbitrary figure as there is no way of being definite as to what a reserve should be in respect to illness. However this should begin to decrease after ten years of satisfactory experience.

The 20% submitted as expense is covered by operating expenses which the company keeps and listed to be about 8 - 10% approximately, and the other 10% being commissions paid to service these contracts by salesmen.

In an effort to determine the validity of the foregoing statements, we felt an independent opinion would certainly serve to inform us still further and the services of a consulting actuary were obtained, whose report is summarized as follows:

"(a) Group experience favorable.

(b) Rates charged satisfactory to average group but, to some extent, high for present group.

(c) Retention and reserves satisfactory only for the first few years of the group but high if continued on the same basis indefinitely.

(d) Consideration should be requested for a lower retention at least within two or three years from now if expanded coverages adopted for group.

(e) In absence of such consideration the M.M.A. should obtain competitive submissions from other Companies."

Foremost in Lipotropic Medication...

LIPOTROPE

TABLETS—ELIXIR

Methionine, choline, cystine, inositol, vitamin B₁₂, nicotinamide and B complex.

The most complete, the most potent and the most economical lipotropic formula.

In geriatrics...

LIPOTROPE GERIATRIC

ELIXIR

Vitamins, rutin, lipotropic factors and anabolic hormones combined. Favours tissue repair, improves capillary resistance, enhances the defence mechanism, and stimulates lipid metabolism.

In hepato-biliary therapy...

LIPOTROPE CHOLERETIC

CAPSULES

New, superior* choleretic and hepato-protector which stimulates biliary function and promotes hepatic cell integrity.

*Weiss, S. & Weiss, J. — "An experimental and clinical Study of a Synthetic Choleretic". The Review of Gastroenterology, 19-10, p. 792-807, Oct. 52.

All "Lipotrope" Products are made in Canada



Over half a century of devotion to medical and pharmaceutical advance in Canada.

With this experience behind them, the company was now able to offer us further protection as requested by this committee which felt that the basic plan was not quite sufficient. Therefore the plan as outlined in the brochure of the Company as submitted was studied and found to present a much better type of protection for our members.

This committee would now like to make the following recommendations:

(1) That we continue with the present firm, and re-enroll all our present members and considerably more. The greater the enrollment the better will be our experience rating.

(2) That Plans 1 to 4 be subscribed to as the plans of choice, as suited to the individual member's choice. Plan 4 being stressed.

(3) That we continue with the present firm for two years, after which time assurance is given that an audit will be carried out annually and any favorable rating will be of benefit to the insured members. If this is unsatisfactory, representation will then be made to other companies to obtain better terms if available.

(4) That the M.M.A. consider the formation of an Insurance Taxing Committee in the event of any disputed claims which will judge the merits of each such claim, in an effort to reduce our claims ratio, thereby insuring that our rates would be improved.

Respectfully submitted,

M. J. Ranosky, M.D.,
Chairman.



The Canadian Medical Association

December 16th, 1957.

To the Secretaries of the Divisions

Dear Doctor Macfarland:

For approximately two years negotiations have been proceeding with the **Department of Veterans Affairs** with a view to instituting provincial fee schedules as the basis for payment to physicians rendering service to entitled veterans under the doctor-of-choice plan. On three occasions the Treasury Board has ruled that D.V.A. may adopt provincial schedules, but that payments to physicians be made on the basis of 90% of the appropriate official schedule of fees.

The most recent investigations of the Advisory Committee to the Federal Government have led to the conclusion that a more favourable outcome is unlikely to be reached, and the position was reported to the Executive Committee in the form of a mail ballot. The vote of the Executive Committee has authorized the acceptance, under protest, of the offer of payment on the basis of 90% of provincial schedules and I have so notified the Minister of Veterans Affairs, expressing our hope that experience with the operation of the plan will be so favourable that the discount will no longer be applied.

I am now advised by Dr. J. N. Crawford, Director General of Treatment Services, that the new basis of payment will be instituted, effective January 1, 1958. The following significant section is extracted from the D.V.A. directive, issued on Dec. 10, 1957, to all districts of the Department:

"The Department shall pay for medical services provided from non-Departmental sources on and after January 1, 1958, not in excess of 90% of the amounts specified in official provincial medical fee schedules; provided that

a) where exceptional skill is required because of complications or otherwise, or where a larger number of visits or a greater amount of time than normal in an average case is required, the Department may pay extra remuneration; and

b) where items are not included in the provincial schedule remuneration shall be computed in equity with procedures of similar responsibility and skill specified in the schedule."

Where a Departmental district is comprised of areas in more than one province, payment for medical services shall be made on the basis of the provincial schedule applicable at the place where the service was provided.

We were asked to arrive at an acceptable definite of the items termed "first visits" or "major office calls" in certain provincial schedules, and the following has been agreed upon. The rates set for these items will be used as a basis to pay for a visit when the patient is seen for the first time by the attending physician or when a patient, previously seen, presents himself with a new illness, when in most cases a complete physical examination, including urinalysis and haemoglobin and sedimentation rate determination, with complete history and report, is carried out.

It was postulated early in the negotiations that provincial fee schedules should be stabilized for a period of three years for Departmental use and I am glad to advise that this stipulation no longer applies. Within the limits of Departmental estimates, account will be taken of periodic adjustments of provincial tariffs in the following manner, quoted from Dr. Crawford's letter:

"All Senior Treatment Medical Officers of the Department have been instructed to notify me of any upward revisions of provincial schedules after January 1, 1958. My approval will have to be obtained before departmental districts pay at the new rate, and the main consideration will be whether there are sufficient departmental funds for this purpose. It is the intention to pay at the revised rate at once if there are adequate departmental funds for the purpose, or alternatively to pay at that rate as soon as additional funds can be obtained. You will note that stabilization of provincial schedules for D.V.A. use for a period of three years is not a requirement. I believe also that our assurances to the Nova Scotia Division of your Association that their proposed new schedule

would be used at once, can be implemented quite promptly by this procedure."

In summarizing the results of a protracted negotiation, I would point out that a very significant advance has been made in the acceptance of the principle that payments to physicians shall be made on the basis of the official provincial medical tariff. Although it has not been possible to achieve our objective completely at this time, the removal of the 10% discount is a goal to be aimed at on the basis of favourable experience with the doctor-of-choice plan. The introduction of a degree of discretion to compensate for tariff adjustments is an unexpectedly favourable development and one which will do justice to those Divisions currently involved in major tariff revisions.

I would bespeak the cooperation of all Divisions in interpreting the details of their respective tariffs to the officials of D.V.A. districts and in adjusting the difficulties which are likely to arise in the introduction of a new system of payment. I have assured the Minister of Veterans Affairs of the desire of the medical profession to afford to the entitled veteran the best medical care which we are capable of providing and of the active support of The Association and its Divisions in achieving this.

Yours faithfully,

A. D. Kelly,
General Secretary.

Manitoba Medico-Legal Society

The Manitoba Medico-Legal Society has commenced its activities for the 1957-58 Season. The majority of the Society's meetings are yet to be held and include talks of interest to all members of the medical and legal professions as well as the Annual Dinner meeting.

The Society, membership in which is open to all members of the medical and legal profession, has as its object the discussion of many problems in which both professions have interest and responsibilities. Furthermore, it offers opportunity for the members of these professions to become acquainted and to exchange views to the advantage of both groups. There is a common ground in which both Law and Medicine are concerned and many misunderstandings and not a few prejudices can be done away with in the friendly social atmosphere provided by the Society. At present, little more than 10% of the medical profession are members. Those not members are missing a great deal of interest and value to them.

The membership fee is nominal—\$2.00 for ladies and graduates in medicine in the first five years of practice—\$5.00 for all others. Cheques may be sent to the Honorary Secretary, 941 Somerset Bldg., Winnipeg.

Winnipeg General Hospital Medical Alumni Association

Under the Chairmanship of Dr. P. H. T. Thorlakson there has recently been formed the Winnipeg General Hospital Medical Alumni Association. Those eligible for membership in this Association will include all graduates in medicine who have served internship or a period of training in the Winnipeg General Hospital, and all graduates in medicine who are or have been appointed members of the attending medical staff.

It is proposed that the first general meeting of this Association be in the nature of a GRAND REUNION to be held in October of 1958 in conjunction with the celebration of the 75th Anniversary of the founding of the Medical College and the 50th Anniversary of the Manitoba Medical Association. It is anticipated that the new hospital buildings will then be ready to hold an "Open House" and the Alumni general meeting will be held in conjunction with this. Further information will be issued from time to time, and it is hoped that all original members will be contacted by mail in plenty of time to make plans to attend this important event.

Obituary

Dr. Ellis Neil East

Dr. Ellis Neil East, 44, died on November 24th. Born in Islay, Alta., he attended high school in Vermilion, graduated M.D. from University of Alberta in 1938, and for ten years practised at Qualicum Beach and Victoria, B.C.

After prolonged post-graduate study at New York, Ann Arbor, Toronto, Boston and Winnipeg General he obtained his fellowship in the Royal College of Physicians in 1952.

He served on the honorary attending staff of the Winnipeg General Hospital, Misericordia and Children's Hospital. He was a member of the department of Medicine in the Manitoba Clinic. He was a member of the Canadian Heart Association and an associate of the American College of Physicians.

He is survived by his wife and a son and daughter.

SPECIALIZING in pregnancy tests

Selected Albino rats used for Accuracy

Laboratory hours 8 a.m. to 5 p.m.

Sundays and holidays by appointment

Containers sent on request

Phone WH 2-6935 day or night

WESTERN BIOLOGICAL LABORATORY

207 Boyd Bldg., 388 Portage Ave.

Winnipeg 1, Man.

Department of Health and Public Welfare
Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1957		1956		Total	
	Nov. 3 to Nov. 30, '57	Oct. 6 to Nov. 2, '57	Nov. 4 to Dec. 2, '56	Oct. 7 to Nov. 3, '56	Jan. 1 to Nov. 30, '57	Jan. 1 to Dec. 1, '56
Infectious Hepatitis	56	26	54	48	546	361
Anterior Poliomyelitis .....	.....	1	3	7	9	19
Chickenpox	49	38	200	134	843	1,096
Diphtheria	7	3	17	16	29	46
Diarrhoea and Enteritis, under 1 year	11	26	11	14	195	144
Diphtheria Carriers	4	4	8	.....	17	10
Dysentery—Amoebic .....	.....	.....	.....	.....	.....	.....
Dysentery—Bacillary	2	12	.....	.....	56	15
Erysipelas .....	.....	4	2	.....	12	14
Encephalitis	1	2	.....	.....	7	8
Influenza	19,373	7,120	6	6	28,342	98
Measles	245	60	193	85	3,688	1,456
Measles—German	1	1	2	1	98	166
Meningococcal Meningitis	1	2	2	.....	19	7
Mumps	13	18	156	57	539	1,224
Ophthalmia Neonatorum .....	.....	.....	.....	.....	.....	.....
Pneumonia, Lobar .....	.....	.....	.....	.....	1	3
Puerperal Fever .....	.....	.....	.....	.....	108	148
Scarlet Fever	18	3	15	12	15	21
Septic Sore Throat .....	.....	.....	6	1	.....	.....
Smallpox .....	.....	.....	.....	.....	1	5
Tetanus .....	.....	.....	.....	1	1	.....
Trachoma .....	.....	1	.....	.....	1	.....
Tuberculosis	62	44	32	43	507	647
Typhoid Fever .....	.....	.....	.....	.....	2	.....
Typhoid Paratyphoid .....	.....	.....	.....	.....	.....	1
Typhoid Carriers .....	.....	.....	.....	.....	1	.....
Undulant Fever .....	.....	2	.....	.....	11	9
Whooping Cough	1	5	25	20	126	386
Gonorrhoea	88	104	128	124	1,086	1,238
Syphilis	2	13	10	10	90	74
Psittacosis .....	.....	.....	.....	.....	.....	1

Four Week Period November 3 to November 30, 1957

DISEASES	*850,000 Manitoba	*80,000 Saskatchewan	*5,404,665 Ontario	*2,932,000 Minnesota
(White Cases Only)				
*Approximate population				
Diphtheria	7	1	1	3
Anterior Poliomyelitis .....	.....	2	1	1
Chickenpox	49	21	459	.....
Diarrhoea & Enteritis, under 1 yr.	11	16	.....	.....
Diphtheria Carriers	4	.....	.....	.....
Dysentery—Amoebic .....	.....	.....	.....	.....
Dysentery—Bacillary	2	.....	2	8
Encephalitis Epidemica	1	.....	1	.....
Erysipelas .....	.....	.....	3	.....
Influenza	19373	880	143	1832
Jaundice, Infectious	56	48	13	32
Measles	245	.....	169	15
German Measles	1	.....	21	.....
Meningitis Meningococcal	1	1	4	8
Mumps	13	.....	222	.....
Psittacosis .....	.....	.....	.....	1
Puerperal Fever .....	.....	.....	.....	.....
Scarlet Fever	18	2	39	16
Septic Sore Throat .....	.....	11	5	19
Smallpox .....	.....	.....	.....	.....
Tetanus .....	.....	.....	.....	.....
Trachoma .....	.....	.....	.....	.....
Tuberculosis	62	21	57	95
Typhoid Fever .....	.....	.....	.....	.....
Typhoid Para-Typhoid .....	.....	1	.....	.....
Typhoid Carrier .....	.....	.....	.....	.....
Undulant Fever .....	.....	.....	.....	.....
Whooping Cough	1	36	120	8
Gonorrhoea	88	.....	54	.....
Syphilis	2	.....	18	.....

†These figures were not given on their reports.

DEATHS FROM REPORTABLE DISEASES

November, 1957

Urban—Cancer, 67; Diarrhoea and Enteritis, 4; Influenza, 15; Pneumonia, Lobar (490), 8; Pneumonia (other forms), 25; Septicaemia and Pyaemia, 1; Syphilis, 2; Tuberculosis, 1. Other deaths under 1 year, 34. Other deaths over 1 year, 237. Stillbirths, 11. Total, 405.

Rural—Cancer, 27; Diarrhoea and Enteritis, 3; Influenza, 15; Measles, 1; Pneumonia, Lobar (490), 1; Pneumonia (other forms), 9; Tuberculosis, 1. Other deaths under 1 year, 16. Other deaths over 1 year, 213. Stillbirths, 14. Total, 299.

Indians—Cancer, 1; Diarrhoea and Enteritis, 1; Influenza, 2; Pneumonia (other forms), 2. Other deaths under 1 year, 0. Other deaths over 1 year, 5. Stillbirths, 0. Total, 11.

Diphtheria—Seven cases and four carriers have been diagnosed. All are confined to the Portage district.

Infectious Hepatitis—Number of cases increasing. Gamma Globulin is available for family contacts. Dosage 0.01 cc. per pound of body weight.

Influenza—The present wave is practically over. A second wave has started in Asia and may visit this continent in March or April. Symptoms and severity are about the same in the cases now occurring in Japan.

Detailmen's Directory

Representing Review Advertisers in this issue, whose names are not listed under a business address.

Abbott Laboratories

G. J. Bowen	4-4559
R. G. (Bud) Harman	LE 3-7509
Alan (Al) M. Grant	CE 3-1802
Bruce Hunter	42-5263

Allen and Hanburys Co. Ltd.

H. W. (Bert) Heaslip	6-4596
----------------------------	--------

Ames Company of Canada, Ltd.

W. H. Davis	VE 2-4869
-------------------	-----------

Ayerst, McKenna and Harrison

W. R. Card	40-7115
C. G. Savage	SU 3-4558
Jack Ostrow	ED 4-3240

Bencard, C.L.

W. J. Tarbet	40-4438
--------------------	---------

British Drug Houses

Gerald Reider	SP 5-2061
W. S. Langdon	43-1325
H. Harvey	6-5341

Ciba Company Ltd.

Leslie D. MacLean	CE 3-3240
-------------------------	-----------

Connaught Laboratories

Brathwaites Ltd.	WH 2-2635
-----------------------	-----------

Frosst, Chas. E.

W. M. Loughheed	40-3963
W. J. McGurran	CH 7-8231
E. R. Mitchell	40-6164
R. P. Roberts	CE 3-5900

Geigy Pharmaceuticals

L. H. Lockshin	JU 2-4445
----------------------	-----------

Lederle Laboratories

J. G. Jonasson	SP 5-4862
W. C. Hall	
J. E. Smith	CH 7-4727

Merck Sharp and Dohme (Canada) Ltd.

W. G. Ball	4-5702
Noel J. Pritchard	40-1162
E. J. Strimbicki	SP 4-0302

Merrell Company, The Wm. S.

Norman Haldane	VE 2-3909
L. Raymond Scott	SP 4-8079

Nadeau Laboratory Ltd.

Andrew Desender	CH 7-4909
-----------------------	-----------

Parke, Davis & Co.

L. W. Curry	40-1138
B. S. Fleury	40-4441
R. J. Robinson (Brandon)	92-288
J. A. Winram	40-5372

Pfizer Canada

E. E. Conway	6-6002
W. R. Mitchell	SP 2-0676
W. G. Johnston	6-1391
Blake Johns	SP 5-1404

Robins (Canada) Ltd., A. H.

Harold Tetlock	LE 3-8386
Fred Gallinger	ED 41-3627

Schering Corp. Ltd.

Halsey Park	40-4346
John D. Nicholson	LE 3-4447

Schmid (Canada) Ltd., Julius

H. V. Walker	LE 3-8664
--------------------	-----------

Searle & Co., G. D.

Harry Chambers	LE 3-6558
----------------------	-----------

Squibb & Son, E. R.

J. H. Don MacArthur	40-4741
M. G. Waddell	4-1552

Will, Chas. R.

A. C. Payne	VE 2-2055
-------------------	-----------

Winthrop Laboratories

R. M. Kelly	Res. 40-6459
A. E. Pauwels	CE 3-2024

Wyeth & Bro., John

A. W. Cumming	40-5694
Stuart Holmes	JU 9-4273

Doctors' and Nurses' Directory

247 Balmoral Street, Winnipeg 1, Man.

24-Hour Service

Phones:	Victorian Order of
Doctors' — SU 3-7123	Nurses — Night calls,
Nurses' — SP 2-2151	Sundays and
Registered Nurses	Holidays
Practical Nurses	Phone SP 2-2008
Dental Emergency Service	
P. BROWNELL, Reg. N., Director	

For Sale

A Victor two-piece ultra violet ray machine (quartz vacuum mercury tube) in good condition. Original cost \$670.00. Can be obtained at once from Mrs. (Dr.) Frank Clarke at Reston.

General Practice Available

General practice available in lively North Dakota town. New modern offices and equipment. Financial backing for young man. Write Fordville Commercial Club, Fordville, North Dakota, U.S.A.

